





Class G126

Book .S7613

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A. M. D. G.

Geography

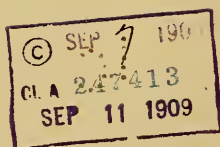
Briefly Told

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La Crosse, Wisconsin.

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PREFACE.

The object of this little work is to simplify, for both pupil and teacher, what is otherwise a cumbersome subject. The field of geographical study is so vast that it requires considerable thought to determine wisely what should be taught and what omitted. This book secures to the pupil an abundant store of facts and contains a reasonable amount of the proper kind of work for each of the six upper grades. It is especially adapted to reviews and furnishes the knowledge necessary to pass any reasonable examination upon this subject.

Meaning of Signs Used.

- * = *III. Grade work;*
- † = *IV. Grade work;*
- § = *may be omitted by the V. Grade;*
- || = *may be omitted by the IV. Grade.*

Summarized Course of Study in Geography.

I. Grade.

- a. *Direction, soil, people, winds, fire, rain.*
- b. *Islands, mountains, oceans.*
- c. *Time of sun and clock.*

II. Grade.

- a. *Hemispheres, zones. Study coal and fuel.*
- b. *Industries. Labor and commerce, etc.*
- c. *Home geography. Parts of the city.*

III. Grade.

- a. *Home geography.*
- b. *All numbers designated by the asterisk (*).*

IV. Grade.

- a. *All numbers designated by the dagger (†).*
- b. *All of North America not designated by this mark (||).*
- c. *All of the United States not designated by this mark (||).*

V. Grade.

- a. *Remaining countries and islands in connection with North America.*

b. Review to page 68. Devote special attention to numbers not marked by (*) or by (†).

c. Review the United States.

d. Africa. Oceania.

VI. Grade.

a. Review briefly the first part of the book beginning with the topic "Climate".

b. Review briefly North America. South America. Home state.

c. Eurasia. Europe. Asia.

VII. Grade.

a. This is the United States History grade. Review Geography related to this study; e. g., when studying the periods of discovery and colonization, review Eurasia and the American coast region, etc.

VIII. Grade.

Final Review with special attention to:

a. Shape and movement of the earth.

b. Change of seasons.

c. Climate; conditions that modify climate.

d. Soil, and how heat and moisture affect it as to animals and vegetation.

e. Relief and drainage of the continents.

f. The American continent (especially the United States and the home state).

g. Europe.

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Ode to Creation's God.

Almighty and Creative Power, Thy name the glad earth sings;
Each mountain, hill, the foamy main, with praise of Thee now rings.
Thy presence, Lord, is everywhere; in starry vaults of blue,
In ends of earth the uttermost, in depths of ocean, too.

Let me, on fair Aurora's wings to view thy works take flight,
What miracles of power divine, greet my enraptured sight!
The arched expanse of heaven's dome in diamond-bright array,
Or bathed in floods of golden light by regal orb of day.

I see those silent spheres of gold, their courses fixed pursue.
The comet weird, with sword of fire, in humble awe I view,
For faith reveals, and I believe, sun, moon, and twinkling star,
And limitless expanse of space, but as thy playthings are.

The storm-cloud's visage, dark and stern, next meets my wond'ring gaze;
While lightning-flash and thunder-roll speak thy stupendous praise.
Here, as on sea of Galilee, at words of "Peace", "Be still,"
The winds, in mute submission, Lord, haste to obey thy will.

Thine artist hand doth paint the sky with glowing tints at dawn,
With golden purple tinge the west, ere evening's shades are drawn;
With silver brush doth gild the moon, and line her ambient clouds,
And from grey shadows weave for night a darkly somber shroud.

Dost cause the day to follow night, and night succeed to day;
The seasons, too, in mystic round, subservient obey.

Thus years and months and minutes, too, obey their Time-King's law,
Their task performed, nor tarry they, but gracefully withdraw.

The clouds, like Egypt's granaries, with garnered wealth are stored,
Which but await thy will ere 'tis upon the glad earth poured.
And from their moistened fruitfulness in tendered grateful yield,
The mighty oak, the dainty flower, green meadow, fertile field.

Within the Kingdom of the deep a world of wonders dwells,
Where finny tribes keep trysts with friends 'mong rosy-tinted shells.
There, too, within the brine's dark caves and hidden wat'ry dells,
In bony plates of armor clad, the deep-sea monster dwells,

Let me but turn my marv'ling glance upon the terrestrial sphere,
Naught I behold but summons me, thy wisdom to revere.
Deep down in heart of Mother Earth, do riches rare abound;
A treasure-trove of wealth untold within the mines are found.

There jewels vie the rainbow tints in sun-kissed drops of dew,
Which mirror thine own shadow bright, from skies ethereal blue,
The myriad, myriad golden grains upon the ocean strand,
Or multiform, or uniform, are fashioned by thy hand.

The whisp'ring groves, the forest glades, the laughing brooks and streams,
That wind their silv'ry course adown thro' valleys and ravines,
The fruit trees, bending 'neath their load, the fields of golden grain,
The vintage of the harvest time, thy Providence proclaim.

While ev'ry blade of tender green, each leaf on waving tree,
Can trace its own peculiar shape, its origin to Thee.
Nor of one creature of thy hand a counterpart is found,
So manifold thy divers ways, thy wisdom so profound!

Unlike, and yet how like those stars that spangle heaven's blue,
Those grains of wheat, those snowflakes soft, those pearly drops of dew.
But 'tis this changeful, changeless law,—thy Love's diversity,
That renders blissful, tho' too short, the long Eternity.

But noblest of thy noble works, gracing Creation's plan,
Sublimest of thy works sublime, thy masterpiece is Man.
And 'tis for him all nature smiles; fair earth, bright sky, blue sea,
Were fashioned all to suit his need, while he was made for Thee.

Nor unto Earth's contracted span is thy great pow'r confined,
Its magnitude must needs surpass the grasp of finite mind.
From far and near, from land and sea, from vaster realms of space,
The incense, Lord, of gratitude ascends before thy face.

Creation's God! thy creatures all accordant voices raise,
And, joining in Creation's hymn, chant their Creator's praise.
And thro' the vaults of heaven above, loud let the anthem swell,
Proclaiming that God's wisdom hath, indeed, "done all things well."

F. S. P. A.

GENERAL DEFINITIONS.

Come, view this earth our God has made;—its lowlands and its highlands, its valleys, plains, its cities, too, its rivers, seas, and islands.

* 1. Geography is a description of the earth's surface considered as the abode of man.

2. Mathematical geography treats of the form, size, and motions of the earth, and of the representation of its surface on a map or globe.

3. Physical geography treats of the land and water, the atmosphere, animal and vegetable life, and their relations to one another.

4. Political geography treats of the earth as divided into countries, and of the conditions of the people inhabiting them.

5. Commercial geography treats of the commodities that are bought and sold by the nations of the earth, their production, transportation, and the trade in them.

6. The solar system is the sun with the planets and their moons revolving about it.

* 7. A Planet (wanderer) is a heavenly body which revolves about the sun. The large planets in order of size are Mercury, Mars, Venus, the Earth, Uranus, Neptune, Saturn, Jupiter.

MATHEMATICAL GEOGRAPHY.

See "General Definitions."

The Earth.

* 1. The Earth, or world, on which we live is one of the heavenly bodies, called planets.

* 2. Shape. The earth is spherical in shape, slightly flattened at the poles, and roughened by mountains and hills.

† 3. Proofs: a. People have traveled around the earth. Magellan, 1519—1522. Drake, 1577—1580.

b. The shadow which the earth casts upon the moon in an eclipse, is always round.

c. In traveling over wide plains, the tops of distant mountains appear long before their bases are visible.

d. The horizon is everywhere a circle.

e. Careful measurements upon the surface of the earth in different

countries, prove its rotundity.

* 4. The horizon is the line where the earth and sky seem to meet.

† 5. The zenith is a point in the heavens directly overhead.

† 6. The nadir is a point in the heavens directly underfoot, or opposite the zenith.

† 7. Size. a. The circumference of the earth is the greatest distance around it, and is nearly 25,000 miles.

b. The diameter of the earth is the distance, in a straight line, through the center of the earth, from surface to surface. It is about 8,000 miles. The polar diameter is about $26\frac{1}{2}$ miles less than the equatorial diameter.

c. The surface area is nearly 200,000,000 square miles. (197,000,000)

† 8. The two movements of the earth are:—

a. Rotation, which is the spinning of the earth on its axis, in a west-east direction, once in twenty-four hours.

b. Revolution, which is the forward motion of the earth in its orbit, or path, around the sun, once in $365\frac{1}{4}$ days (365 days, 5 hours, 24 minutes). This period is called a year.

† 9. Effects of Rotation: a. Day and night. As the earth rotates, only one half of it is in the sunlight and has day, while the other half is in the shadow and has night.

Illustrate by means of the globe and candle or a sketch.

b. Time: The amount of time occupied by the earth to make one revolution, is called a day. The day is divided into 24 equal parts, called hours. The hour is sub-divided into 60 minutes, and the minute into 60 seconds.

* c. The cardinal points are east, south, north, and west. Facing the sunrise, or east, we have south to the right, north to the left, and west back of us. Half way between south and east is south-east; between north and east is north-east; between south and west is south-west; and between north and west is north-west.

* 10. Directions may be told:—

* a. The sun rises in the east and sets in the west. At noon the sun is directly over, or vertical to, a north-south line of direction.

b. The North Star which is pointed out by the two “pointers” of the Great Bear, or Great Dipper, is always in the north.

See Fig. II, page 10.

c. The compass, an instrument containing a needle on a pivot,

pointing to the north, enables sailors to tell in which direction they are sailing.

11. The circle of illumination is the great circle which separates the dark side of the earth from the light side; or, it is the dividing line between night and day.

Sketch to illustrate. Use globe and candle.

* 12. The axis of the earth is its north-south diameter, on which it performs its daily rotation.

* 13. The poles are the ends of the earth's axis. The end directly under the North Star is called the north pole, and the opposite end is called the south pole.

The north polar star, a fixed beacon light,
Is a guide for the sailor and leads him aright;
And all other stars revolve round it each day;
But unchanged its position, unwav'ring its ray.
Fixed, too, the earth's axis, pointing toward the North Star,
While in the Great Dipper two pointers there are
That show us Polaris, that alpha so fair,
In the bright constellation we call the Small Bear.

Illustrate axis and poles. See Fig. II, page 10.

† 14. Effect of Revolution. It is one of the causes of the change of seasons.

Natural, Astronomical, and Artificial Facts.

† 15. Means for describing the location of places on the earth are imaginary lines, or circles, on its surface. On a map or globe these lines are real.

* A map is a representation of the earth, or of a part of it, on a flat surface.

* 16. A globe is a representation of the earth on a sphere.

17. A great circle is any circle that divides the earth into two equal parts, or Hemispheres.

* 18. Hemispheres are two equal parts into which the earth may be divided. Geographers divide the earth on the meridian 20 degrees west of Greenwich for an Eastern and a Western Hemisphere.

The Western Hemisphere contains North and South America and is called the New World.

The Eastern Hemisphere contains Asia, Europe, Africa, and Australia, nearly twice as much land as the Western. It is called the Old World because our ancestors lived there thousands of years before Columbus found the New World.

* The earth is also divided into a Northern and a Southern Hemisphere by the equator.

Which grand divisions lie entirely in the Northern Hemisphere? Chiefly or entirely in the Southern?

† 19. A small circle is any circle that divides the earth into two unequal parts.

† 20. Parallels are east and west lines, or small circles, extending around the earth parallel to the equator.

† 21. The Tropic of Cancer is a parallel, $23\frac{1}{2}$ degrees north of the equator.

† 22. The Tropic of Capricorn is a parallel, $23\frac{1}{2}$ degrees south of the equator.

† 23. The North Polar, or Arctic Circle, is $23\frac{1}{2}$ degrees from the north pole and $66\frac{1}{2}$ degrees north of the equator.

† 24. The South Polar, or Antarctic Circle, is $23\frac{1}{2}$ degrees from the south pole and $66\frac{1}{2}$ degrees south of the equator.

* 25. The Equator is a great circle midway between the poles. It divides the earth into a northern and a southern hemisphere.

† 26. Meridian Circles are great circles, and divide the earth into equal east and west portions.

† 27. Meridians are half circles extending from pole to pole, perpendicular to the equator.

† 28. A Prime Meridian is any meridian from which longitude is reckoned. The prime meridian at Greenwich, England, is the generally adopted prime meridian of all nations.

† 29. Latitude is distance north or south of the equator expressed in degrees, minutes, and seconds, reckoned on the meridians, and indicated on the parallels of a map.

† 30. The Latitude of:

- a. The Equator is 0 degrees.
- b. The Tropic of Cancer is $23\frac{1}{2}$ degrees n.
- c. The Arctic Circle is $66\frac{1}{2}$ degrees n.
- d. The North Pole is 90 degrees n.
- e. The Tropic of Capricorn is $23\frac{1}{2}$ degrees s.
- f. The Antarctic Circle is $66\frac{1}{2}$ degrees s.
- g. The South Pole is 90 degrees s.

Illustrate.

† 31. The greatest latitude a place can have is 90°. Why?

32. Distance in miles from the equator to either pole— $\frac{1}{4}$ of 25000 miles (the circumference)=6250 miles, or $25000 \div 360 \times 90$.

33. Longitude is distance east or west of a given meridian, expressed in degrees, minutes, and seconds, reckoned on the parallels and indicated on the meridians of a map or globe.

34. A degree of longitude is greater at the equator than it is either north or south of it. Degrees of longitude decrease in distance toward the poles, where there is no longitude.

35. The greatest longitude a place can have is 180°.

36. The International Date Line is the 180th meridian, near which travelers from either the west or the east correct their time-reckoning.

37. The point that has neither latitude nor longitude is the place where the prime meridian crosses the equator, which is in the Gulf of Guinea, west of Central Africa.

38. The Longitude of the prime meridian is 0°

* 39. Zones are artificial belts, extending parallel to the equator, into which the earth's surface is divided, and which differ in temperature. They are determined by the inclination of the earth's axis.

* 40. The zones in order from north to south:

a. The North Frigid Zone, lies around the north pole, and measures $23\frac{1}{2}^{\circ}$ from the pole to the arctic circle.

b. The North Temperate Zone lies between the north frigid and the torrid zone, and measures 43° from the arctic circle to the tropic of cancer.

c. The Torrid Zone lies between the two temperate zones, and measures 47° from the tropic of cancer to the tropic of capricorn.

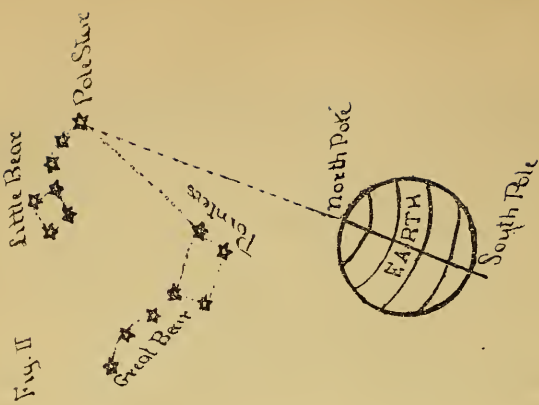
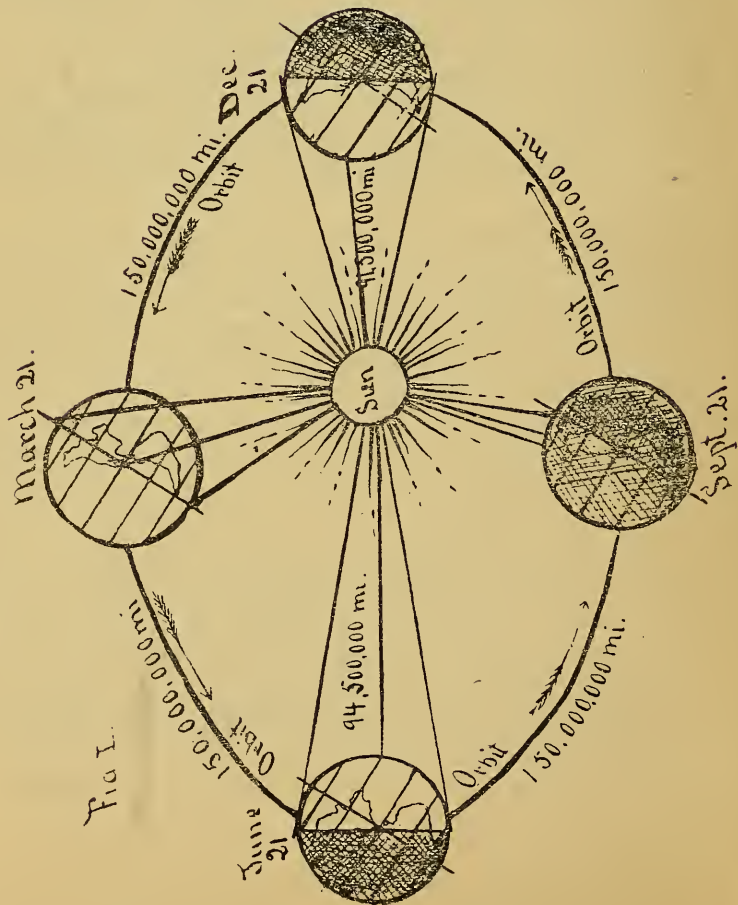
d. The South Temperate Zone lies between the torrid and the south frigid zone, and measures 43° from the tropic of capricorn to the antarctic circle.

e. The South Frigid Zone lies around the south pole, and measures $23\frac{1}{2}^{\circ}$ from the pole to the antarctic circle.

* 41. The Seasons of the Frigid Zone are a six-month summer and a six-month winter.

The plants are few on account of the cold climate. Low shrubs, mosses, and lichens are found.

Change of Seasons.



The animals are valuable for their fur, blubber, feathers, or bone. The polar bear, the seal, the walrus, the whale, the reindeer, and the eider duck are found.

- * 42. The Seasons of the Temperate Zones are spring, summer, autumn, and winter.

The plants are of many kinds. The principal trees are oak, pine, birch, maple, ash, and basswood. The principal fruit trees are apple, peach, plum, and cherry. Other productions are cereals, garden vegetables, sugar-cane, cotton, tobacco. The principal cereals are wheat, corn, rye, barley, oats, buckwheat. Sugar-cane, rice, cotton, and tobacco grow in the warm belt, lying next to the torrid zone. In our part of the north temperate zone the warm belt lies between the tropic of cancer and a line crossing east and west about through the middle of the United States. In the Old World, the line runs about east and west along the main highlands of Europe and Asia.

Some of the animals are: a. Wild: bear, buffalo, deer, wolf, fox, birds of prey, birds of song, etc.

b. Domestic: horse, camel, sheep, cattle, dog, hog, poultry, etc.

The Seasons of the Torrid (hot) Zone are a dry season in which no rain falls, and a wet season in which there is a continuous heavy rainfall.

Plants.—The richest and densest forests of the world are found in this zone. The principal trees are palm, banana, breadfruit, etc. Other plant productions are spices, coffee, tea, tobacco, cotton, rice, etc.

Many of the animals are large and fierce. The lion, tiger, elephant, ape, monkey, giraffe, zebra, crocodile, boa, rhinoceros, flamingo, peacock, parrot, bird of paradise, etc. are animals of this zone. Here are found the birds of the most beautiful plumage and insects of brilliant hues, as well as snakes and other reptiles.

The Seasons.

- * 43. The earth's axis leans, or inclines, $23\frac{1}{2}^{\circ}$ from a perpendicular to the plane of its orbit.

- * 44. The orbit of the earth is the path in which it moves around the sun. *Illustrate.*

- * 45. The plane of the earth's orbit is the level surface which the orbit includes.

* 46. Causes of the seasons are the inclination of the earth's axis, together with its revolution around the sun.

* 47. Change of Seasons. *See Fig. I, page 10.*

a. On the 21st of March the sun's rays are vertical at the equator. The rays of heat and light from the sun extend from pole to pole. The days are everywhere 12 hours long. This is the vernal (spring) equinox for the north temperate zone. Our spring begins at this time, and autumn begins in the south temperate zone.

b. On the 21st of June the slant rays of heat and light from the sun extend $23\frac{1}{2}^{\circ}$ beyond the north pole, and lack $23\frac{1}{2}^{\circ}$ of reaching the south pole. (They mark the antarctic circle.) The vertical rays strike the tropic of cancer. In the north temperate zone the days are longer than the nights, and in the south temperate zone they are shorter than the nights. The north frigid zone has constant day, and the south frigid zone has continuous night. The length of the days at the equator is 12 hours. The north pole is turned towards the sun, and the south pole away from the sun. This is the summer solstice for the north temperate zone and the winter solstice for the south temperate zone. The earth is now farthest from the sun, and is said to be in aphelion.

c. On the 21st of September the sun's rays are vertical at the equator. The rays of heat and light from the sun extend from pole to pole. The days are everywhere 12 hours long. This is the autumnal equinox for the north temperate zone. Our autumn begins at this time and, spring begins in the south temperate zone.

d. On the 21st of December the slant rays of heat and light from the sun extend $23\frac{1}{2}^{\circ}$ beyond the south pole, and lack $23\frac{1}{2}^{\circ}$ of reaching the north pole. (They mark the arctic circle.) The vertical rays strike the tropic of capricorn. In the north temperate zone the days are shorter than the nights, and in the south temperate zone they are longer than the nights. The north frigid zone has constant night and the south frigid zone has continuous day. The length of days at the equator is 12 hours. The north pole is turned away from the sun, and the south pole towards the sun. This is the winter solstice for the north temperate zone and the summer solstice for the south temperate zone. The earth is now nearest the sun, and is said to be in perihelion.

* 48. The equinoxes are the dates when the days and nights are everywhere equal. The spring, or vernal equinox, is March 21st, and the autumnal equinox is September 21st.

49. Solstice means a standing still of the sun, and tropic means to turn. It is the time of the year when the sun is at its greatest declination, either north or south, where it seems to pause with its vertical rays on the tropic (turn), before it turns to retrace its course, usually June 21 and Dec. 21, called in the northern hemisphere the summer and the winter solstice respectively, and the reverse in the southern hemisphere.

50. Antipodes are those who live diametrically opposite each other, so that their feet are towards each other.

Our antipodes arise from sleep,
When we to rest have gone:
They bask in summer sunshine fair,
When we our fur-coats don.

51. a. The sun rises exactly east and sets exactly west March 21 and September 21.

b. After Sept. 21st, (autumnal equinox) the sun rises a little farther south of east and sets a little farther south of west each successive day until Dec. 21, our shortest day. After this day it gradually rises a little nearer east and sets a little nearer west until March 21, (vernal equinox) when it again rises exactly in the east and sets exactly in the west.

† Hence the sun rises south of east and sets south of west during our winter months. It rises north of east and sets north of west during our summer months.

§ 52. The midnight sun is the sun as it is continually visible in the polar zones during the respective solstice.

In the north frigid zone it is seen from May 13 until July 29 during which time day light is continuous.

Hammerfest, in Norway, the "Land of the Midnight Sun", is the most northern town of importance in the world, its latitude being 70°, only 20° from the pole. To this city tourists travel thousands of miles to see the full-orbed midnight sun.

§ The beautiful Aurora Borealis of the polar regions, is the phenomenon known as northern lights in our hemisphere. It is due to the same natural force that flashes in the sky in the form of lightning. It appears in many different shapes, the most common form of which is an arch of light from which shining stars shoot upward.

Sometimes one arch appears above another, and travelers have seen it resemble a gorgeously colored ribbon, extending in folds in the heights of the air. Again it may be seen in the form of a fan spreading out from the horizon.

United States Land Survey.

The Township.

55. The system of land surveying, as used in the Western States and the newer Southern States, is said to have been devised by Thomas Jefferson.

56. A town or township is a subdivision of a county, usually six miles square.

56. A range is a row of townships extending north and south.

57. A principal meridian is a north and south line, carefully fixed by astronomical measurement, and used as a standard line in locating ranges.

58. A base line is an east and west line from which townships in each range are measured and numbered.

Townships and ranges are numbered as indicated in the diagram.

Let *PM* represent the third principal meridian, and *BL* its base line. North and South lines (called range lines) are surveyed on either side of it, dividing the land into strips, or ranges, six miles wide. These are numbered east and west, as indicated by the Roman numerals.

Township lines are surveyed, six miles apart, parallel to the base line, and the townships of each range are numbered north and south of the base line. They are designated thus: A in the diagram is Township 3 north, range 5 E, of the third principal meridian. This may be written: T. 3 N., R. 5 E. of 3rd p. m. E is T. 2 S., R. 4 W. of 3rd p. m."

In the same way locate C and D and others.

59. Correction lines. Because of the spherical form of the earth, range lines converge toward the north; if continued without change, townships far north from the base line would be considerably less than six miles wide. To make allowance for this convergence, Correction Lines are established parallel to the base line, at distances varying in different states from 24 to 60 miles apart.

Townships

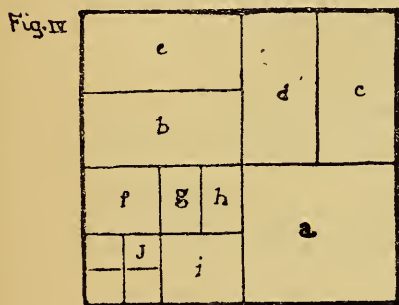
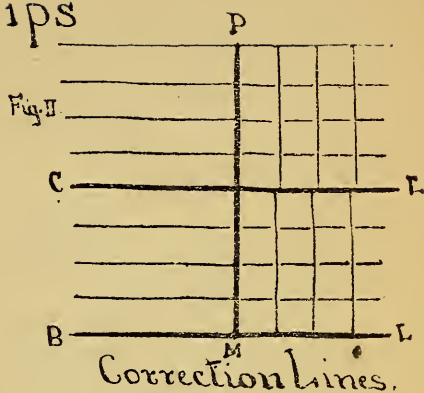
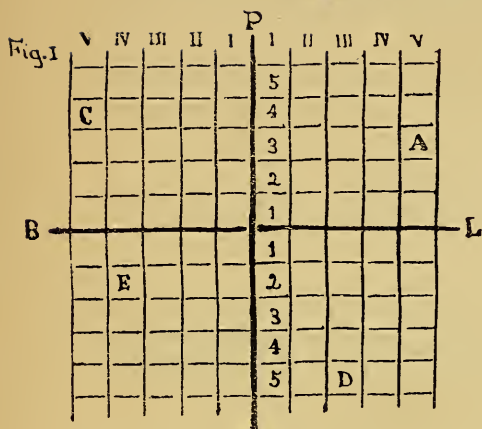


Fig. III

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Sections of a Township

These correction lines become new base lines on which townships are established six miles apart as before.

60. A section is one of the 36 divisions into which a township is divided, each of which is one mile square. The sections are numbered beginning at the N. E. corner and ending at the S. E. corner. A full section contains 640 acres.

Each section is divided into quarters, and these again into quarters. Thus, 40 acres is described not as a sixteenth but as a quarter of a quarter section.

See Fig. IV. Page 15.

h in Figure IV. page 15 is described as the east half of the north-east quarter of the south-west quarter.

A section is described thus:

a. Let the pupil draw an outline sketch of his own state, locate the principal meridian and base lines, and then show the position of townships as the teacher dictates: T. 23 N., R. 8 E. of 3 p. m. (Which means, Township 23 north, range 8 east of 3 principal meridian.) T. 32 N., R. 5 E. of 4 p. m. Let each pupil locate and describe his father's farm or the town in which he lives. What city is in T. 7 N., R. 22 E. of the 4 p. m.? etc.

b. For the arithmetic class this subject presents a great variety of practical examples suited to all grades above the primary.

Search Questions.

1. Are the zones natural or artificial divisions?
2. Where are the days and nights always equal?
3. When are the days and nights everywhere equal?
4. At Hammerfest, (about 70 degrees N. Latitude) where does the sun set on the 21st of June?
5. What change in the position of the earth would cause the Tropic of Cancer to pass through your home? How wide would the temperate zone then be?
6. Distinguish between rotation and revolution; vertical and perpendicular; level surface and plane surface.
7. A common impression is that the Chinese are our antipodes? Is it correct? Who are?
8. What would cause the frigid and torrid zones to overlap?
9. Under what conditions would there be no change of day and night?
10. What is the earth's orbit? The plane of the earth's orbit? Define Day-circle.
11. Two persons were born January 1, 1830, and both died Jan.

1, 1885; yet one lived ten days longer than the other. Explain how this could be possible.

12. Up means from the earth's center; down, towards its center. The north pole is nearer the center by about 13 miles than any point on the equator. The Mississippi River extends over nearly one-fourth of the distance from pole to equator; does it flow up or down?

13. Stand with your face north at 12 o'clock Saturday night. One-half of your body will be in this week and the other half in next week. How can you "jump into next week"?

15. A gentleman on board an American vessel on the 3 of July, asked the captain how the crew would celebrate on the morrow. "We shall have no Independence Day this year," said the captain. "Why, is not this the third of July?" inquired the passenger. "Yes; but tomorrow will be the fifth." Where was the vessel, and in what direction was it going?

Physical Geography.

See "General Definitions".

With interest will we further search deep down in Learning's lore,
And studying land, sea, winds, and tides, their Maker we'll adore.

Natural Divisions of the Earth.

* 1. The Surface of the earth is composed of land and water, and contains about 197,000,000 square miles.

Of this area about one-fourth is land and three-fourths is water.

* 2. According to size and form the land is subdivided into continents, peninsulas, capes, islands, and isthmuses.

* 3. According to elevation the land is subdivided into mountains, plateaus, plains, and valleys.

* 4. Bodies of water are classified as oceans, seas, gulfs or bays, sounds, straits, lakes, and rivers.

The Land.

Subdivisions according to Size and Form.

Use map and globe.

* 5. A continent is a continuous mass of land; or, a continent is one of the six grand divisions of land on the globe.

* 6. The continents in order of size are: Asia (17,000,000+sq. mi.),

Africa (11,500,000+sq. mi.), North America (8,000,000—sq. mi.), South America (6,800,000+sq. mi.), Europe (3,700,000+sq. mi.), Australia (3,700,000+sq. mi.)

It is not necessary to memorize figures. Merely use for the purpose of comparison.

* 7. An island is a small mass of land surrounded by water.

† 8. The three largest islands are:

a. Greenland, an island of Danish America, northeast of continental North America, washed by the waters of the Arctic and Atlantic oceans;

b. New Guinea, an island of Malaysia, north of Australia, in the Pacific Ocean;

c. Borneo, an island of Malaysia, north-west of Australia, in the Pacific Ocean.

† 9. Continental islands are islands lying near the coast of a continent, from which they have become separated by a sinking of the land.

† 10. Some continental islands are:

a. Madagascar, east of southern Africa, in the Indian ocean;

b. Japan Islands, east of Asia, in the Pacific;

c. British Islands, west of continental Europe, in the Atlantic ocean.

Name and locate others.

† 11. Oceanic islands are islands that lie at a great distance from a continent, and are surrounded by ocean depths. Nearly all of these lie in the Pacific ocean.

† 12. Some oceanic islands are:

a. Hawaiian islands, in the Pacific ocean, about 2,100 miles southwest of San Francisco.

b. New Zealand, in the Pacific ocean, about 1,200 miles southeast of Australia.

c. St. Helena, in the Atlantic ocean, about 1,300 miles southwest of southern Africa.

It is known as the prison home of Napoleon I, Emperor of France, who was banished to this island by the English after his defeat at Waterloo.

† 13. Coral islands are oceanic islands of limestone formation,

built up from the bottom of warm, shallow seas, and formed from the skeleton of small jelly-like animals, called coral polyps.

† 14. Some coral islands are:

a. The Bahamas, which comprise the northern group of the West Indies;

b. The Bermudas, consisting of 360 coral islands, which lie 600 miles east of South Carolina, U. S.;

15. Volcanic islands are islands formed by the eruptions of volcanoes.

16. Some volcanic islands are:

a. The Hawaiian islands, the entire group of which has been thrown up by volcanic eruptions. Where are they?

b. The Philippines, consisting of 1500 islands, southeast of China in the Pacific ocean;

c. Iceland, the Azores, Canaries, Cape Verde, and St. Helena, in the Atlantic ocean.

† 17. Reefs are long, narrow islands, generally parallel to the coast.

† 18. The Great Barrier Reef about 30 miles off the northeastern coast of Australia, is the largest coral belt in the world.

† 19. Keys are islands rising a little above the surface of the water.

† 20. The Florida Keys are a chain of low coral islands at the extremity of the peninsula of Florida.

21. An atoll is an irregular, ring-shaped coral island.

22. A lagoon is a shallow lake in the center of an atoll.

23. No fewer than sixty groups of atolls are found in the Carolina Archipelago, north of New Guinea.

* 24. An archipelago is a group of islands, or a body of water, containing such a group.

† 25. Some archipelagos are:

a. The Arctic Archipelago, north of North America, in the Arctic ocean;

b. The West Indies, east of southern North America;

c. The East Indies, the most extensive group of islands on the globe, which stretch in a curve from the Strait of Malacca, to the Channel of Formosa.

Name and locate the islands of the Atlantic. Of the Pacific. Of the Indian ocean. Of the Arctic ocean.

* 26. A peninsula is a portion of land nearly surrounded by water.

† 27. Some peninsulas of North America are:

a. Yucatan, a southeastern peninsula, extending northward into the Gulf of Mexico;

b. Lower California, a southwestern peninsula, extending southward into the Pacific ocean;

c. Florida, a southeastern peninsula, extending southward into the Atlantic ocean.

Name and locate others.

† 28. Some peninsulas of Europe are:

a. The Grecian and the Italian peninsula, two southern peninsulas, each of which extends southward into the Mediterranean Sea;

b. The Scandinavian peninsula, a northwestern projection, washed by the waters of the Atlantic and Arctic;

c. The Spanish peninsula, projecting from the southwest, and washed respectively by the waters of the Atlantic ocean, the Mediterranean Sea, and the Bay of Biscay.

† 29. Some peninsulas of Asia are:

a. Arabia, in the southwest, washed by the waters of the Red Sea and the Indian ocean;

b. India, in the south, projecting into the Indian ocean;

c. Malay peninsula, in the southeast, washed by the waters of the Indian ocean and the South China Sea.

Name and locate the peninsulas of North America. Of Europe. Of Asia.

* 30. A cape is a point of land extending into the water.

A cape is sometimes called a point, head or naze.

* 31. A promontory is a high and rocky cape; such as the Cape of Gibraltar at the southern extremity of Spain.

† 32. Spits are low sandy capes.

† 33. Hooks, or bills, are curved spits, as is Cape Cod, Massachusetts.

† 34. Extremity capes of Continental North America are:

a. Point Barrow, north, northern Alaska, on the Arctic;

b. Cape Charles, east, eastern Labrador, on the Atlantic;

c. Point Mariato, south, southern Panama, on the Pacific;

d. Cape Prince of Wales, west, northwestern Alaska, on Bering Strait.

† 35. Extremity capes of South America are:

- a. Point Gallinus, north, on the Caribbean Sea.
- b. Cape St. Roque, east, on the Atlantic.
- c. Cape Horn, south, where the Atlantic and Pacific meet.
- d. Cape Parina, west, on the Pacific.

† 36. Extremity capes of Africa are:

- a. Cape Bon, north, on the Mediterranean;
- b. Cape Guardafui, east, on the Indian ocean;
- c. Cape Agulhas, south, on the Indian ocean;

Cape of Good Hope, is a southern cape of historical note on the Atlantic;

- d. Cape Verde, west, on the Atlantic.

† 37. Extremity capes of continental Europe are:

- a. North Cape, northern Norway, on the Arctic;
- b. Gibraltar, a southern rocky promontory of Spain, on the Strait of Gibraltar;
- c. Cape Finisterre, a north-western cape of Spain, on the Atlantic.

† 38. Extremity capes of Asia are:

- a. Northeast Cape, northwestern Siberia, on the Arctic;
- b. Cape Deshnef, northwestern Siberia, on Bering strait;
- c. Cape Romania, at the southern extremity of Malay peninsula, on the Indian ocean;
- d. Cape Baba, western Asia Minor, Asiatic Turkey, on the Mediterranean.

† 39. Extremity capes of Australia are:

- a. Cape York, north, northern Queensland, on Torres Strait;
- b. Sandy Cape, east, northeastern Queensland, on the Atlantic;
- c. Point Philip, south, southern Victoria, on Bass Strait;
- d. Northwest Cape, west, Western Australia, on the Indian ocean.

Name and locate the capes on the west and east Atlantic. On the west and east Pacific. On the Indian ocean. On the Arctic ocean.

* 40. An isthmus is a narrow neck of land connecting two larger bodies of land.

* 41. a. The isthmus of Panama connects North America and South America.

b. The isthmus of Tehuantepec is the narrow part of southern

Mexico.

c. The isthmus of Suez connects Africa and Asia.

† 42. Isthmuses are often cut by canals as is the isthmus of Suez.

* 43. A coast is that part of land which borders on a large body of water.

The waters of the ocean are said to wash a coast; those of a lake, a shore; and those of a river a bank.

† 44. A coastline is the irregular line where the land and water meet.

† 45. A coastline is said to be regular or irregular. An irregular coastline, that is, one with many indentations, has promoted, and still promotes, commerce and travel; and has aided in the advancement of civilization, as was the case with Europe, Egypt, North America, and Asia in previous ages.

Divisions of Land according to Elevation.

* 46. A hill is a small elevation of land.

* 47. A mountain is an elevation of land much higher than the surrounding country. (About 1,000 feet.) The highest part is called summit; the lowest part, base; the sides, slopes; the direction, trend.

Mention mountains spoken of in the Bible History.

* 48. A mountain peak is a single mountain terminating in a steep, pointed summit.

† 49. The highest peak of:

a. North America is Mt. McKinley, over three and two-thirds miles, in the western Rocky Mountains.

b. South America—Mt. Aconagua, over four and one-fourth miles, in the southern Andes, in Argentina.

c. Europe—Mt. Blanc, nearly three miles, in the Alps, France.
Mt. Elburz—over three and one-half miles, in the Caucasus, southeastern European Russia.

d. Asia—Mt. Everest, about five and one-half miles, in the Himalayas in Népal, north of eastern India. It is the loftiest peak in the world.

e. Africa—Kilimanjaro, nearly four miles, in the eastern part of Africa.

f. Australia—Mt. Kosciusko, over one and one-fourth miles, in

eastern Australia.

* 50. A mountain range, or chain, is a connective line of mountains extending in the same general direction.

† The Alleghany Mountain, in the eastern United States, and the Apennines in Italy are mountain ranges, or chains.

* 51. A mountain system is a collection of ranges, or chains, united by a highland between them.

† The Rocky Mountains, in western North America, the Andes, in western South America, and the immense system which, under various names, stretches from the Pyrenees, in Europe, through the Caucasus and Himalayas, to the northeast coast of Asia, are illustrations of mountain systems.

† 52. The loftiest mountains in the world are the Himalayas, in south-central Asia, bordering India on the north.

* 53. A plain is a broad, nearly level extent of land; such as the Great Central Plains of North America, the Plains of China in eastern China, and the Atlantic Plain of western Europe.

* 54. A plateau, or table-land, is an elevated plain, often traversed or bordered by ranges of mountains.

† 55. Illustrations are:

a. The Rocky Mountain Plateau, in western North America.

b. The Pamir Plateau, in southern Asia, north of India, called the "Roof of the World", is the loftiest plateau on the globe.

* 56. A water-shed, or divide, is the summit of a ridge that divides the rain-water and causes it to flow down either side; or, it is a ridge, or height of land, that separates river basins.

† 57. The Rocky Mountains separate the river basins of the Pacific slope from the other three great drainage areas of North America. It is the continental divide of this grand division.

The Height of Land, in the north-central part of the United States, forms the divide between the Gulf of Mexico, the Arctic ocean, the Gulf of St. Lawrence, and the Hudson Bay.

The immense mountain system, which, under various names, stretches from the Pyrenees, in Europe, through the Caucasus and Himalayas, to the northeast coast of Asia, forms the continental divide of the land-mass of Eurasia.

† 58. The relief of a country is its elevations and depressions. The

elevations may consist of mountains or plateaus; the depressions of plains or rolling hills.

† 59. The highland side of each continent is toward the Pacific or toward the Indian ocean. We may trace an almost continuous magnificent line of mountain chains, extending in a horse-shoe-shaped curve from Cape Horn, South America, to Cape of Good Hope, Africa, forming the primary highland of the world.

† 60. All the long, gentle slopes of the world ascend to the Atlantic and Arctic oceans, while the short slopes are directed to the Pacific and Indian oceans.

* 61. A volcano is a mountain with an opening at its mouth or side, called crater, from which issue flames, ashes, and molten rock, or lava.

62. Volcanic eruptions are caused by the subterranean forces seeking and finding an outlet.

63. a. The most remarkable series of volcanoes is found in the great line of mountain chains that extend in a horse-shoe-shaped curve about the Pacific from Cape Horn to the Cape of Good Hope. (Sometimes called the "circle of fire".)

b. Another series, or belt, extends irregularly across southern Europe and possibly from thence around the world.

† 64. Some noted volcanoes are:

- a. Mt. Chimbarazo, in Ecuador, South America.
- b. Mt. Loa, on Hawaii, the largest of the Hawaiian islands.
- c. Mt. Etna, in Sicily.
- d. Mt. Hekla, in Iceland.
- e. Mt. Vesuvius, near Naples, in Italy.

65. Some volcanic eruptions of historic importance are:

a. In 79 A. D. an eruption of Mt. Vesuvius destroyed and buried the cities of Herculaneum and Pompeii in Italy.

b. In 1902 an eruption of Mt. Pelee on Martinique, one of the West India Islands, entirely destroyed the city of St. Pierre.

c. In 1906 Vesuvius was again active and many villages were overwhelmed by falling ashes and streams of lava. Over 2,000 lives were lost.

* 66. An earthquake is a trembling or jarring of the crust of the

earth.

67. Cause—Earthquakes are caused by the interior forces seeking an outlet.

An earthquake is more fearful than a volcanic eruption. No other calamity crowds such an amount of suffering and ruin into so small an extent of time.

68. Earthquakes are common in all parts of the world, but are most frequent in the great highlands, and along the margin and the islands of the Pacific ocean.

69. April, 1906 earthquake, fire, and a tidal wave, practically destroyed the city of San Francisco, California.

August, 1906, earthquake and fire caused great destruction of life and property in Valparaiso, Santiago, and other Chilean cities.

December, 1908, earthquake, fire, and tidal waves devastated Sicily and southern Italy, destroying about 100,000 lives.

* 70. Prairies are fertile plains, either level or with long rolling swells, as in the Mississippi valley, North America.

† 71. The Great Plains of North America lie on the eastern side of the Rocky Mountain plateau, and descend gradually toward the Mississippi river and the Gulf Plain.

† 72. The Llanos are the treeless, grassy plains of the Orinoco river basin in South America.

† 73. The Pampas are the great plains of coarse grass in the La Plata, or Parana river basin of South America.

† 74. The Silvas are densely wooded plains of the Amazon river basin in South America.

† 75. The Steppes of southern Russia and western Asia, are barren plains with scanty herbage and flowering shrubs.

† 76. The Tundras are the marshy, mossy plains of northern Siberia.

* 77. Swamps are plains saturated, or partly covered, with water.

† 78. The Dismal swamp of Virginia, the Everglades in southern Florida, and the swamps of the Mississippi Delta, are examples.

* 79. A valley, or basin, is a tract of land, partly or wholly surrounded by hills or mountains.

80. Examples of the world's large valleys are:

a. The Amazon valley in northern South America;

b. The Kongo valley in western Africa;

c. The Nile valley in northeastern Africa;

d. The Mississippi valley between the Rocky and Appalachian mountains in North America;

e. The La Plata valley in southeastern South America.

* 81. A canon is a very steep and narrow gorge worn by a stream.

† 82. The most remarkable canon in the world is the Grand Canon of the Colorado River in Arizona. Its walls, for more than 300 miles, are from 3,000 to 6,000 feet sheer from the water's edge.

† 83. A pass, or gap, is a break, an opening, or a narrow road, cutting a mountain chain, like the gap cut by the Delaware river in New Jersey and Pennsylvania, or that cut by the Potomac at Harper's Ferry, West Virginia.

* 84. A desert is a tract of land which is unproductive for want of sufficient moisture.

† 85. a. The Sahara, in northern Africa, is the largest desert in the world, being nearly two-thirds the size of the United States.

b. From the Sahara a northeasterly zone of deserts extends through Arabia, Persia, and China, ending in the Great Desert of Gobi.

* 86. An oasis is a fertile spot in a desert.

Subdivisions of Water.

Oceanic Waters.

* 87. The sea, or ocean, is a continuous body of salt water surrounding the continents and covering three-fourths of the earth's surface.

† 88. The average depth of the sea is about two and one-half miles. In some places it is about six miles deep.

† 89. The bottom of the sea, like the land, is diversified by mountains and valleys, and has its plains and plateaus.

† 90. The sea, or ocean, is divided, partly by the continents and partly by imaginary lines, into five divisions: the Arctic, Antarctic, Atlantic, Pacific, and Indian oceans.

91. The Pacific, the largest of the oceans, is bounded on the

east by the Americas and the meridian of Cape Horn; on the west by Asia, the Great Sunda Islands, Australia, and the meridian of Tasmania; on the north by Bering Strait; and on the south by the Antarctic circle.

92. The Atlantic, the second largest of the oceans, is bounded on the east by the coasts of Europe and Africa, and the meridian of Cape Agulhas; on the west by the Americas and the meridian of Cape Horn; on the north by the Arctic circle; and on the south by the Antarctic circle.

93. The Indian, the third largest of the oceans, is bounded on the east by the Great Sunda Islands, the west and south coasts of Australia, and the meridian of Tasmania; on the west by the coast of Africa, and the meridian of Cape Agulhas; on the north by the coast of Asia, and on the south by the Antarctic circle.

94. The Antarctic, the fourth largest of the oceans, surrounds the south pole, and is bounded by the Antarctic circle.

95. The Arctic, the smallest of the oceans, surrounds the north pole, and is bounded by the northern coasts of North America, Asia, and Europe, and by the Arctic circle.

The White Sea and Hudson Bay are included in the Arctic ocean.

† 96. The three movements of the sea are:

Waves, tides, and currents.

* 97. Waves are rising and falling ridges of water, caused by the friction of the wind, and varying in height from a few inches to fifty feet or more.

Use as illustration a waving wheat field.

† 98. Breakers are waves of the sea which break on a beach, rock, shoal, etc. They have been known to dash 250 feet high.

† 99. A beach is a gently sloping, sandy, or pebbly shore of a sea, lake, or large river.

† 100. Shoals and banks are shallow parts of the sea, or ocean.

† 101. Tides are the regular rising and falling of the water every twelve hours, caused by the attraction of the sun and of the moon.

† 102. High, or flood-tide is a six-hours' rising of the water.

† 103. Low, or ebb-tide is a six-hours' falling of the water.

104. Spring-tides, or the highest tides, occur when the sun and moon attract the water in the same direction.

105. Neap-tides, or the lowest tides, occur when the sun and moon

attract the water at right angles.

The moon revolves about the earth once in twenty-eight days (lunar month.) During this time the moon is twice in a line with the sun and twice at right angles. Hence two spring-tides (one at new, and one at full moon) and two neap-tides (one at the first and one at the third quarter of the moon) occur every lunar month (twenty-eight days).

106. The height of a great tidal-wave reaches from two or three feet in mid-ocean to five or nine feet at the projecting capes and bounding coasts.

107. Ocean currents are vast streams flowing in the sea. They are caused by the unequal heating of the water, by the winds, and by the rotation of the earth.

a. Warm currents are streams flowing toward the poles.

b. Cold currents are streams flowing from the polar regions.

108. Some warm currents:

a. The Equatorial Current originates near the equator. It flows in a westerly direction in both, the Pacific and Atlantic oceans.

b. The Gulf Stream is a broad branch of the Equatorial Current. Its warm blue waters seem to issue from the Gulf of Mexico. It follows the coast at a distance of about a hundred miles as far north as Cape Fear, North America, and then turns eastward and flows through the Atlantic to Europe. There it separates and part of it warms Europe far into the Frigid zone. Its greatest velocity is about five miles an hour. In some places it extends to the bottom of the ocean.

c. The Japan, or Kuro Siwo (Black Water) current, is a branch of the Equatorial Current, and very much resembles the Gulf Stream. It crosses the Pacific ocean from Japan to North America, and there modifies the climate from Oregon to Alaska.

109. Some cold currents:

a. The cold Labrador current, laden with icebergs, sets southward from Greenland as far as Newfoundland, where the north Atlantic drift melts the icebergs. The meeting of these two currents causes fogs to constantly hover over this region. The Labrador current cools northeastern North America and gives it a cloudy climate, which Longfellow refers to in his *Evangeline*:—

“ And aloft on the mountains
Seafogs pitched their tents, and mists from the mighty Atlantic
Looked on the happy valley, but ne’er from their station descended.”

b. The cold Peru Current follows and cools the western coast of South America.

110. The influence of ocean currents is one of the grand revelations of the wisdom of the Creator, and has had much to do with shaping the history of mankind.

a. Ocean currents influence the distribution of temperature in the oceans and in the winds that blow over them; hence they modify climate. A part of the Gulf Stream flows northward past the British Isles and Norway, while the cold Labrador Current from the Arctic regions flows southward past Labrador and Newfoundland. Hence, in the same latitude, winds from the sea are mild in north-western Europe where the harbors are open the whole year round, while they are chilling in northeastern North America where the harbors of the Greenland and Labrador coasts, which are swept by winds from over the cold current, are closed with ice in winter. Northwestern North America has a milder climate than northeastern Asia in corresponding latitude, because it is swept by winds from over the Japan current, while northeastern Asia is chilled by winds from over a cold current.

b. They shorten the voyages of sailors and facilitate commerce.

Columbus made use of the North Equatorial Current when he discovered the New World, and was again borne homeward by the eastward-flowing Gulf Stream.

When sailors find their struggling bark cased in ice by wintry storms, they direct its course to the Gulf Stream, where the icy covering soon melts away.

c. They distribute vegetable and animal life by bearing seeds from one remote land mass to another, and carrying animals on spacious ice-bergs to new climes and homes.

d. They promote health: Without its mighty currents, its tides and waves, the ocean would become a stagnant pool, infecting the whole atmosphere.

* 111. A sea is a sheet of water nearly or quite surrounded by land.

† 112. The Caribbean Sea, east of Central America, is enclosed by the West Indies, South America, and Central America.

† 113. Ten seas in, or bordering Europe are:

The Caspian, Azof, Black, Marmora, Aegean, Adriatic, White, Mediterranean, North, Baltic, Kara, and Irish Seas.

Locate on the map.

† 114. Ten Seas in, or bordering on, Asia are:

The Bering, Okhotsk, Japan, Yellow, East China, South China, Arabian, Red, and Aral seas.

Locate on the map.

115. Seas partly enclosed by the East Indies:

The Java, Timor, Arafura, Banda, Celebes, and Sulu seas.

* 116. A gulf, or bay, is an arm of the sea, or some other body of water, extending into the land.

† 117. Some Gulfs and Bays:

a. The Gulf of Mexico, an arm of the Atlantic, indents southeastern North America;

b. The Gulf of California, an arm of the Pacific, separates Mexico from its Californian peninsula;

c. Hudson Bay, an arm of the Arctic, indents northeastern Canada;

d. Bay of Fundy, an arm of the Atlantic, indents Nova Scotia, southeastern Canada.

† 118. The Gulf of Bothnia, an arm of the Baltic sea, lies between Russia and Sweden.

b. The Gulf of Finland, an arm of the Baltic Sea, indents western European Russia;

c. The Bay of Biscay, an arm of the Atlantic, indents France and Spain;

† 119. a. The Gulf of Aden, an arm of the Arabian Sea, lies between the southern Arabian peninsula and northeastern Africa;

b. The Persian Gulf, an arm of the Arabian Sea, lies between the Arabian peninsula and Persia;

c. The Bay of Bengal, an arm of the Indian Ocean, lies between India and Indo China;

† 120. The Gulf of Guinea, an arm of the Atlantic, indents west-central Africa.

Name and locate principal gulfs and bays on the west Atlantic. On the east Atlantic. On the west Pacific. On the east Pacific. On the Indian ocean. On the Arctic ocean.

† 121. A bight is an open bay.

† 122. a. The bights of Benin and Biafra are open bays indenting west-central Africa.

b. The Great Australian Bight is an open bay indenting southern Australia.

* 123. A strait is a narrow passage of water connecting two larger bodies of water.

† 124. Some noted straits:

a. The Strait of Gibraltar, connects the Atlantic ocean and the Mediterranean Sea, and separates the Spanish peninsula from northwestern Africa;

b. The Dardanelles, or Hellespont, connects the Aegean and Marmora seas, and separates the Balkan peninsula from Asia Minor;

The Bosphorus, or Strait of Constantinople, connects the Marmora and Black seas, and separates the Balkan peninsula from Asia Minor;

d. The Malacca Strait, connects the South China Sea and the Indian ocean, and separates the Malay peninsula from the island of Sumatra;

e. The Strait of Magellan connects the Atlantic and Pacific oceans and separates the island Tierra del Fuego from the mainland of South America;

f. The Strait of Babel Mandeb connects the Red Sea and the Gulf of Aden, and separates northeastern Africa from the Arabian peninsula.

Trace a water route from North Cape to the Sea of Azof. Other like routes.

* 125. A channel is a wide strait.

† 126. Channels:

a. The English Channel connects the Atlantic ocean and the North Sea, and separates England from the mainland of Europe;

b. The Mozambique Channel lies between the island of Madagascar and the mainland of Africa.

* 127. A sound is a shallow channel or bay.

† 128. a. Long Island Sound lies between Long Island and the states of New York and Connecticut;

b. Albermarle Sound indents North Carolina;

c. Puget Sound indents the state of Washington.

* 129. A canal is an artificial strait, or channel, for the passage

of boats.

† 130. The Erie Canal forms a passage from the Hudson River to Lake Erie.

b. The Suez Canal forms a passage from the Red Sea to the Mediterranean Sea.

† 131. A firth, frith, fiord, or inlet is a small bay, usually having steep shores.

Name and locate firths of the British Isles. Fiords of Norway and Sweden.

* 132. A harbor, or haven, is a small sheltered inlet where ships may anchor and ride in safety.

* 133. A dock, or wharf, is a construction raised on the shore of a harbor, river, canal, or the like, for the convenience of loading and unloading ships and other vessels.

"Commerce pushes its wharfs into the sea." Bancroft.

Continental Waters.

* 134. A river is a large stream of fresh water flowing in a channel on the surface of the land.

Name rivers you have seen.

* 135. Creeks, brooks, and rills, are small streams of water.

* 136. A river may be formed in the following manner:

The water from the rain and melting snow which does not sink into the ground, is divided by a watershed, or ridge, and caused to collect, first in rills, brooks, and creeks. These small streams flowing together form large streams which again unite to form a river, the waters of which are eventually borne to the ocean or some other body of water.

What is a glacier? A divide, or watershed? Nos. 160 and 56. Name rivers that originate in lakes. In glaciers. In mountain slopes.

* 137. The source of a river is the place where it begins. This may be in lake, a glacier, or on a slope of a divide.

* 138. A tributary is a branch of a river.

Name tributaries of large rivers.

* 139. The right bank is that on the right hand in descending a river, the left bank on the left hand. Down a river is toward its mouth. Up a river is toward its source.

See p. 17. No. 12.

* 140. The mouth of a river is the place where it flows into another body of water.

* 141. A river bed is the channel in which a river flows.

* 142. The confluence, or junction of two rivers, is the place where they meet.

† 143. Pittsburg, Pennsylvania, is located at the confluence, or junction, of the Monongahela and the Allegheny river.

144. Buffalo is situated at the confluence of the Erie Canal and Lake Erie.

† 145. The delta of a river is the alluvial land between two or more of its mouths.

* 146. Some deltas:

a. The delta of the Mississippi, the most important in America, measures over 12,000 square miles.

b. The delta of the Rhine, the most important delta in Europe, constitutes the rich and populous lands in Holland.

c. The delta of the Nile, Egypt, noted for its fertility since the dawn of civilization, measures nearly 10,000 square miles.

d. The delta of the Hoang and Yangtze rivers, China, the largest and most populous in the world, has an area of 100,000 square miles, and a population of 100,000,000.

Name and locate other deltas.

147. An estuary is a single and very wide mouth of a river facing the tide. Such are the mouths of the St. Lawrence, Columbia, and Hudson rivers of North America; of the Thames and Severn of Europe; of the Amazon and La Plata of South America.

148. A bayou is a branch of a stream flowing through a delta.

149. An oxbow loop is the horseshoe-shaped bend of a river.

An oxbow lake is the cut-off oxbow loop.

Oxbow loops and oxbow lakes occur all along the middle course of the Mississippi River.

* 150. Levees, or dikes, are artificial embankments made to protect the surrounding land from overflows.

151. a. Levees have been constructed along the bayous of the Mississippi.

b. Long dikes hold back the waters of the ocean in Holland.

† 152. Dalles, or gorges, are narrow passages between hills. The dalles of the Wisconsin and St. Croix rivers are noted scenes of attraction in the state of Wisconsin.

† 153. Alluvial land, or a flood plain, is smooth, level land built up

of the sediment deposited by a river.

* 154. A river system is a river with all its branches.

* 155. A river basin is the land drained by a river and its tributaries.

For the world's great river basins, or valleys, see 80.

† 156. Some of the longest rivers of each continent:

1. North America:

a. Mississippi-Missouri, 4,300 miles;

b. Mackenzie, 2,300 miles;

c. St. Lawrence, 2,200 miles;

2. South America:

a. Amazon, 3,750 miles;

b. Plata (Parana), 2,500 miles;

c. Orinoco, 1,600 miles;

3. Europe:

a. Volga, 2,300 miles;

b. Danube, 2,000 miles;

c. Don, 1,325 miles;

4. Asia:

a. Yenesei, 3,400 miles;

b. Yangtze, 3,320 miles;

c. Ob, 3,000 miles;

5. Africa:

a. Nile, 4,100 miles;

b. Kongo, 3,000 miles;

c. Niger, 3,000 miles;

6. Australia:

a. Murray, 1,500 miles.

Use figures for the purpose of comparison only.

Name and locate the principal rivers flowing into the Atlantic ocean. Into the Pacific ocean. Into the Indian ocean. Into the Arctic ocean. Into the Mediterranean. Into the Black Sea. Into the Caspian Sea.

† 157. Rapids, or Cascades, are that part of a river where the current moves with great swiftness down an inclined bed, as the Lachine rapids in the St. Lawrence.

* 158. A cataract, or waterfall, is a stream descending abruptly from a higher to a lower level, or, a cataract is a stream dashing over a precipice.

† 159. Three famous cataracts:

a. The Niagara Falls between Lakes Erie and Ontario are regarded as the grandest of all cataracts.

b. The Yosemite Falls in California are the most remarkable of the many beautiful cataracts in the wonderful Yosemite Valley.

The Victoria Falls of the Zambezi river, Africa, vie in magnificence with those of Niagara.

† 160. A glacier is an immense mass of ice and snow, moving slowly down the slope of the land.

161. The glacial epoch was a long period of time thousands of years ago. During this time the Lawrentian glacier covered North America with a continental ice sheet as far south as the Ohio and Missouri rivers. While another continental glacier moved over most of northern Europe from the Scandinavian peninsula.

162. Areas of glacial drift, huge round boulders, drumlins, many scooped-out rock basins and river valleys, irregular coasts and thousands of lakes still trace the site of the continental glaciers.

* 163. Icebergs are large masses of floating ice, usually broken from polar glaciers. From one-eighth to one-tenth (seldom more than 200 or 300 feet) is above water.

† 164. An avalanche is a mass of snow dashing down the side of a mountain, often sweeping away trees and houses, and burying whole villages.

* 165. A pond is a body of water filling a low place in the land.

A puddle is a very small pond. A lake is a very large pond.

* 166. A lake is a body of either fresh or salt water nearly or quite surrounded by land.

† 167. Lakes are classified as fresh-and salt-water lakes.

Some lakes are called seas, as the Dead sea, and the sea of Galilee, from the German word "See".

† 168. A salt lake is a lake having no outlet. The water evaporates and leaves the salt.

† 169. A fresh-water lake is a lake having an outlet.

170. The largest fresh-water lake of each continent:

1. North America:

Lake Superior, the largest expanse of fresh water in the world. (Area 31,200 square miles; depth 1,008 feet.)

2. South America:

Lake Titicaca, in the Bolivian Andes, is the highest of the

great lakes of the globe. (12,000 feet above the sea.)

(Area 3,261 square miles; depth 925 feet.)

3. Europe:

a. Lake Ladoga.

(Area 7,000 square miles; depth 732 feet.)

4. Asia:

a. Lake Baikal, the deepest lake in the world.

(Area 13,200 square miles; depth 4,500 feet.)

5. Africa:

a. Lake Victoria, the second largest fresh-water lake on the globe.

(Area 27,000 square miles; depth 620 feet.)

Name and locate other principal lakes on the globe, especially those of the resident state.

* 171. A spring is a stream of water issuing naturally from the ground.

† 172. A spring may be formed in the following manner:

The water, which falls to the earth in the form of rain or snow, sinks till it reaches a hard layer of rock, on which it flows along, and finally comes bubbling out somewhere. This springing from the earth, as it were, gives it the name of "spring."

† 173. Mineral springs are springs, containing mineral salts, which the water has collected from the rocks or soil, and which are often of medicinal value.

174. a. The medicinal value of their waters determined the location and settlement of the cities Saratoga Springs, N. Y., Vichy, in central France, White Sulphur Springs, W. Va., and Karlsbad, Bohemia.

b. Many mineral springs occur in the Appalachian and Rocky Mountains.

c. Wisconsin has numerous mineral springs. Its mineral water of Bethesda Spring at Waukesha is shipped to all parts of the globe.

175. Hot springs contain warm, hot, or even boiling water, and are formed by the contact of the water with heated rocks or with the chemical decomposition of rocks.

176. The Yellowstone National Park in Wyoming, and the state of Colorado, are famed for their many hot springs.

† 177. A geyser is a hot mineral spring from which jets of hot water or steam are forced high into the air at regular intervals.

178. Many remarkable geysers are found in the Yellowstone National Park, Wyoming, the most noted of which are the Grand Geyser, the greatest in the world, and Old Faithful. There are also noted geysers in Iceland and in certain parts of New Zealand.

The Atmosphere.

† 179. The atmosphere is the vast ocean of air which envelopes the land and sea.

* 180. Air is an invisible gas which surrounds the earth at a depth of from 50 to 200 miles.

† 181. The air presses against the earth at the weight of about one ton to the square foot.

† 182. Air pressure is measured by means of the barometer.

† 183. The barometer (Greek, weight-measure) is an instrument to measure the pressure of the atmosphere.

Invented by Torricelli, an Italian philosopher.

† 184. The barometer is used to ascertain the height of mountains. The ascent of 1000 feet causes the lowering of about one inch in the barometer.

† 185. The temperature of the atmosphere, or the degree of heat or cold, is measured by means of the thermometer.

† 186. The thermometer (Greek, heat-measure) is used to measure the temperature of the air and of other bodies. It consists of a very fine glass tube, opening into a bulb at its lower end and usually containing mercury. In very cold latitudes, the mercury is substituted by alcohol colored red.

§ 187. a. The Fahrenheit thermometer (F), taken as the standard, marks 32° at the freezing point and 212° at the boiling point of water, and is used in the United States and other English-speaking countries.

b. The Centigrade thermometer (C), marks 0° at the freezing point and 100° at the boiling point, and is used in France, and in scientific works of other countries.

The Reaumur thermometer (R), marks 0° at the freezing point, and 80° at the boiling point, and is in common use in Germany.

Waters of the Atmosphere.

* 188. The heat of the sun causes water to evaporate, or to take the form of vapor.

* 189. Vapor is invisible moisture in the air.

* 190. Warm air holds much more moisture than cold air.

† 191. Air is at the dew-point, or saturated, when it contains all the moisture it can hold.

† 192. Dew, fog, clouds, rain, snow, or hail, are formed when the air becomes cooled below the dew-point and condenses a part of its moisture.

* 193. Dew is moisture collected during clear, still nights in the form of drops on plants and other bodies, which have become cooled below the dew-point of the surrounding atmosphere.

* 194. Fogs and mists are visible vapors that float near the surface of the earth.

Why have Newfoundland and Nova Scotia a cloudy climate? No. 109, page 28.

* 195. Clouds are partly condensed vapors floating high in the air. They are, as it were, the floating cisterns or reservoirs of the earth. Why?

† 196. Clouds are classified according to their forms; as cirrus, or feathery clouds; cumulus, or heaped-up clouds; stratus, or layer clouds; nimbus, or rain and snow clouds.

* 197. Rain is condensed vapor which falls in drops when the air is rapidly cooled.

* 198. Snow is frozen vapor which falls in flakes; it is formed when the condensation of vapors takes place below the freezing point, 32° F.

How could you cause a snow storm in a warm room?

* 199. Frost is frozen dew and is formed when the objects on which the moisture collects become cooled below the freezing point, 32° F.

* 200. Hail is frozen rain and appears to owe its origin to a sudden condensation.

201. Rainfall includes all atmospheric moisture which reaches the earth's surface in solid or liquid form.

Study the subject under "Winds" before taking up the following on rainfall.

Distribution of Rainfall.

202. a. Daily rains are likely to occur in the equatorial calm belt;

here the vapor in the ascending air is chilled and condensed. This narrow rain belt follows the vertical rays of the sun northward and southward every six months, hence the year in the torrid zone is divided into a wet and a dry season.

The heaviest rainfall in the world occurs on the southern slope of the Himalayas, north of the Bay of Bengal. Why? When the heavier? Why? (See monsoons.)

b. Abundant rains occur on the windward slopes of the mountains of the torrid zone in the path of the trade winds. Although the trade winds become warm and are full of moisture, they yield little or no rain because they have nothing to chill them; but, when they ascend a mountain chain, they become chilled and the vapor condenses. The opposite slopes have little or no rain.

c. Little or no rain occurs in the tropical calms, because the air descends and becomes warmed.

d. An ample rainfall occurs on parts of the western coasts of the continents, because the prevailing westerly winds move from warmer to colder latitudes, and are therefore chilled and their vapor condensed.

e. A rainy season occurs on the land when the monsoons blow from the ocean, and on the water when the monsoons blow from the land. In either instance the winds become chilled and the vapor condensed.

Where do monsoons occur? Reason. No. 218.

f. Cloudy, rainy, or snowy weather is almost always brought by the winds on the front, or eastern side of a cyclone, because these winds blow from warmer to colder latitudes and are chilled and the vapor condensed.

g. Little rain occurs in the polar regions because cold air cannot contain much vapor. No. 220.

† 203. An annual, well distributed rainfall of twenty inches is necessary for the growth of crops, unless the land is irrigated.

† 204. Irrigation is the process of watering land artificially.

The winds from the Mediterranean waft moisture to the Great Desert; why does no rain fall? No. 215, c. Why does more rain fall near the ocean than in the interior of a country? Why have warm regions of the earth generally more rainfall than cooler countries? No. 202, a. b. Why is there but little rain on the tops of very high mountains? No. 202, g. How do mountains cause some regions to have more and some to have less rain? No. 227, f. Why have some warm regions but little

rain? No. 215. Locate warm regions that have much rain and such that have little or no rain and give reasons. No. 214.

† 205. Lightning is a sudden flash of light caused by the discharge of two electrified cloud regions.

† 206. Thunder is the noise produced when the air rushes in with great force to fill the vacuum produced by the lightning.

† 207. A rainbow is a bow, or arch, showing in concentric (having a common center) bands the several colors of the spectrum. It is usually seen after a shower in the quarter of the heavens opposite the sun, and also in the spray of cataracts. The sun, shining through the falling water, separates the light into its colors and forms the rainbow.

† 208. The colors of the spectrum may be produced by casting the sunlight on the wall by means of a three-cornered piece of thick glass.

The principal colors of the rainbow are red, orange, yellow, green, blue, and violet.

Winds.

* 209. Wind is air in motion and is caused by the unequal heating of the earth's surface.

† 210. Heat expands and makes the air light, while cold contracts and makes it heavy. Heavy air, by reason of its weight, forces itself under lighter air.

211. The calm belts are zones within which there is little or no rain. They are confined chiefly to the continents and seldom affect the coasts far inland.

212. The three belts of calms are:

a. The Equatorial calm belt is a narrow zone on the equator, where the warm air rises and is not felt as wind. It is an area of excessive rainfall and little fair weather. No. 202, a.

The Tropical calms are located one near each tropic, where the air that rises at the equator descends again, forming belts of calms, called:

b. Calms of Cancer, about 30° north of the equator;

c. Calms of Capricorn, about 30° south of the equator. No. 202, c.

213. The Cause of Trade Winds. The surface of the earth receives most of its heat near the equator. The atmosphere, being greatly heated, rises and floats off toward the polar regions. The cool

heavy air from the poles pushes in to take the place of the ascending warm air. Because of the rotation of the earth from west to east, these cool winds blow from the northeast in the northern hemisphere, and from the southeast in the southern hemisphere; hence,

214. The trade winds are the cool winds which push in along the surface from the northeast on one side of the equatorial calm belt, and from the southeast on the other. No. 202, b.

215. The trade wind area is a great fair weather belt. When the trade winds blow over the land far from any ocean they evaporate much moisture and cause a dry climate. The Sahara is a great trade-wind desert.

216. The Prevailing Westerly Winds. The heated air rising at the equator and floating toward the poles, gradually becomes cool, descends, and returns as southwest surface winds in the northern hemisphere, and as northwest surface winds in the southern hemisphere. No. 202, d.

They are often called anti-trade winds. Why?

217. Cold polar winds sometimes occur in the temperate zones. They blow from the northeast in the northern hemisphere and from the southeast in the southern hemisphere.

218. Monsoons (seasons) are much like the trade-winds, except that they reverse their direction every half year, and occur only in the regions of the Indian Ocean. In July and August, when the heat belt has shifted to the north, parts of southern Asia are heated much more than the Indian Ocean, therefore the winds blow from the ocean over the land. In January, when the heat belt has shifted to the south, the Indian Ocean is heated more than the adjacent land. This causes the wind to blow from the land over the Indian Ocean. No. 202, e.

219. All the wind belts shift north and south during the year with the vertical rays of the sun. No. 202, a.

220. Cyclones are whirling winds which originate in the belts of westerly winds. They move from west to east, whirling as they go, and often drawing the air in toward them for many hundreds of miles. They render the winds of the temperate zones very irregular, yield frequent rains, (No. 202, d. f.) and are the cause of most of our weather changes.

221. Highlands and cyclones are the rain producers of the temperate zones. No. 202, b, f.

222. Hurricanes, or tropical cyclones, are severe, whirling storms which occur on the eastern and southern coasts of the United States, and the southeastern coast of Asia where they are called typhoons. They originate near the tropics, and sweep in a great curve into temperate latitudes. They are the only storms in the trade wind belt.

223. Tornadoes are small and very severe local cyclones, that occur in the eastern and central parts of the United States in the spring months, after a very warm day; the warm air rises, the cold air falls, and a terrific whirling wind is developed, followed by heavy rainfall.

224. Storms are caused by a rapid rising of heated air.

225. The simoon is the very hot and dry wind of desert regions.

226. The blizzard is the terrific cold wind of the plains and prairies. See chart pp. 46, 47 for Winds and Rainfall.

Climate.

* 227. Climate is the condition of a region with respect to heat and moisture.

228. Conditions that modify climate in order of their importance are:

- † a. Latitude, or distance from the equator;
- † b. Altitude, or distance above sea level;
- c. Nearness to the sea or other large bodies of water;
- d. Winds;
- e. Ocean Currents;
- f. Highlands;

229. Effects of:

† a. Latitude. The nearer the equator, the warmer the climate; because from the equator to the poles the climate gradually grows colder and the amount of rainfall decreases. Why?

† b. Altitude. As the height above sea level increases, the air becomes cooler. Quito, South America, though nearly on the equator, has a delightful climate because it is located about two miles above sea level.

c. Nearness to the sea or other large bodies of water may equalize the extremes of temperature and moisture. Large bodies of water are

warmer in winter and cooler in summer than the land. Regions over which the winds come from the water, have warmer winters and cooler summers than might be expected from their latitude.

d. and e. Ocean currents and winds influence the distribution of temperature. In the British Isles the winds come from the ocean and are loaded with moisture and warmth from the Gulf Stream. The harbors are open and the pastures green the whole year round. In Labrador (corresponding latitude) the winds from the land and the breezes from the cold Arctic current are cold and dry; hence it is almost uninhabitable because of its cold climate.

f. Highlands. The windward slopes of mountains may be deluged with rain, while the others may be destitute of it. Warm, moist winds, ascending a mountain chain, become chilled and deposit rain, while the opposite side has little or no rain. The western slope of the Rocky Mountains and the eastern slope of the Brazilian plateau owe their copious rainfall to this fact. The tops of mountain ranges sometimes reach above the rain-bearing winds and may be destitute of rain.

Soil.

* 230. Soil is the thin layer of surface earth, which, like some great blanket, is tucked around the wrinkled and age-beaten form of our globe.

† 231. Subsoil is the harder and colder earth under the surface layer.

232. The principal agents that form soil are weathering, vegetable, and animal life, and running streams.

233. Weathering is the atmospheric action of heat, cold, moisture, and winds on rock surfaces. Explain.

234. Vegetable and animal life help to loosen particles of rock, or add to the soil by their decay. Explain.

235. Running streams carry soil from highlands and valleys, and deposit it in the form of alluvial lands. No. 153, p. 33.

† 236. The three kinds of soil are:

- a. Sand, or crumbled sandstone;
- b. Clay, or powdered limestone;
- c. Loam, or a mixture of sand, clay, and vegetable mold.

† 237. Fertile soil (loam) is soil adapted to the production of good crops, or that furnishes sufficient nourishment for the growth of plants.

† 238. Sterile, or barren soil, is soil that is not adapted to the production of crops, or that does not furnish sufficient nourishment for the growth of plants.

Mineral Productions.

239. Mineral productions, in regard to their uses to mankind, may be arranged into four classes; minerals, metals, building material, and precious stones.

Minerals.

† 240. Coal is the most abundant and important force-producing mineral.

† 241. Coal originated from gigantic trees and other vegetation, which in the first ages of the earth perished and were covered by sediments of successive ages; by chemical changes this decayed vegetable matter was finally converted into the mineral condition of coal.

242. The three kinds of coal are anthracite, or hard coal; bituminous, or soft coal; and cannel, the best and hardest coal.

The United States surpasses all other countries in the production of coal.

243. Peat, used as fuel and as fertilizer, originated from accumulated decayed vegetable matter, such as the bogs of Ireland are noted for.

244. Coke is made of soft coal from which certain gases have been expelled by heating. It is chiefly used in blast furnaces.

245. Charcoal is carbonized wood. It is much lighter and more porous than true coal.

Wood is covered with turf, so as to admit little air. The wood is then slowly burned till only the carbon remains.

† 246. Petroleum (rock oil) and natural gas are thought to result from the slow decay of plants and animals buried years ago in the sands now changed to rock.

247. Both petroleum and gas are reached by sinking pipes down to the oil or gas-bearing layers of porous rock.

248. From petroleum are made kerosene, gasoline, benzine, vaseline, various oils for oiling machines, and many other useful ar-

ticles.

The two chief petroleum regions in the world are the United States and both sides of the Caucasus, in Russia.

249. Natural gas is used chiefly for fuel purposes, and its low cost has caused a rapid growth in manufactures.

250. Salt, a substance used for seasoning food, preserving meat, etc., is found native in the earth and is also produced by evaporation from sea water and brines pumped from great depths.

The United States manufactures more salt than any other country.

251. Sulphur is a lemon-yellow powder which burns with a blue flame and suffocating odor. It is used in manufacturing gunpowder and matches, also for medicinal purposes.

It is obtained chiefly from volcanic districts; Sicily, Chile, Mexico.

252. Graphite is soft native or artificial carbon often called black lead; it is used for many purposes, especially in lead pencils.

253. Graphite is found native in Siberia and parts of the United States. Artificial graphite is manufactured in large quantities at Niagara Falls from anthracite coal.

Metals.

254. Ore is rock from which metal is obtained, such as iron ore, silver ore, lead ore.

A few metals, such as gold and copper, are sometimes found in a pure state.

Smelting is the process of extracting metal from its ore.

† **255. Iron** is the most useful and most widely distributed of the industrial metals.

The United States, Germany, and the United Kingdom rank foremost in its production.

† **256. Steel** is iron that has been put through a series of heating processes. For given size, it is the strongest material known.

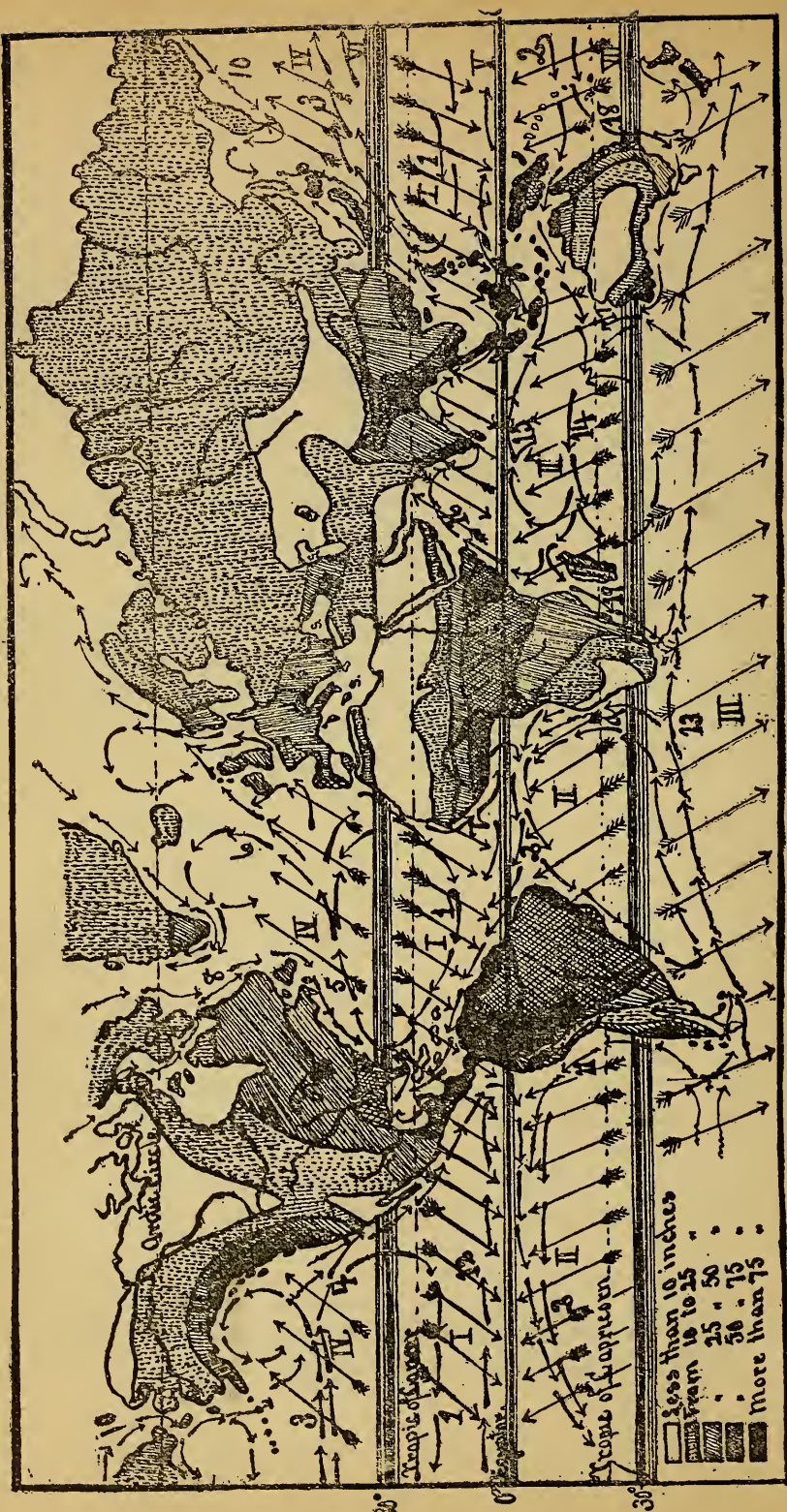
† **257. Copper** is a ductile malleable metal of a reddish color, next to iron in usefulness.

The United States surpasses all other countries in the production of copper.

258. Gold and Silver, termed precious metals, are not nearly so useful as iron or copper. They are valuable chiefly because of their scarcity.

259. Gold, yellow in color, is the most ductile and malleable metal. It is sometimes found pure, or almost pure in nature; but more frequently in the veins of quartz rocks or in the gravel of river

Chart - Ocean Currents - Winds - Mean Annual Rainfall.



KEY TO CHART. I. Ocean Currents. Pp. 28—29.

- | | |
|---|---|
| 1. North Equatorial Current.
Nos. 108 a, 110 b. | 9. Benguela Current. |
| 2. South Equatorial Current.
No. 108 a. | 10. Bering Strait Current. No. 110 a. |
| 3. Kuro Siwo, or Japan Current.
Nos. 108 c, 110 a. | 11. Peru Current. No. 109 b. |
| 4. California Current. | 12. Equatorial Counter Current. |
| 5. Gulf Stream.
Nos. 108 b, 110 a and b, p. 43, no. 229 d. | 13. Antarctic Current. |
| 6. North Atlantic Drift. No. 109 a. | 14. Equatorial Current. No. 108 a. |
| 7. Guinea Current. | 15. Indian Counter Current. |
| 8. Labrador Current.
Nos. 109 a, 110 a, p. 43, no. 229 d. | 16. Monsoon Drift. |
| | 17. West Australian Current. |
| | 18. East Australian Current. |
| | 19. Mozambique Current. |
| | N. B. Wavy-shafted arrows, cold currents. |

II. Winds. pp. 40—42.

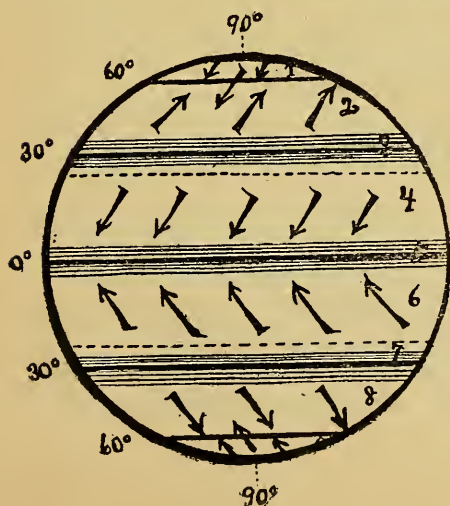
- | | |
|---|--|
| I. Northeast Trade Winds.
Nos. 213, 214, 215. | IV. Prevailing Westerly Winds, or
Southwest Antitrade Winds. No. 216. |
| II. Southeast Trade Winds.
Nos. 213, 214, 215. | V. Equatorial Calms. No. 212. |
| III. Prevailing Westerly Winds, or
Northwest Antitrade Winds. No. 216. | VI. Calms of Cancer. No. 212. |
| | VII. Calms of Capricorn. No. 212. |
| | VIII. Monsoons. No. 218. |

Rainfall.

Account :—

- For the copious rainfall on the western coast of North America and on the western slopes of the southern Andes. 202 d.
- For the copious rainfall on the eastern slopes of the northern Andes, and of the Brazilian Plateau. 202 b.
- For the abundant rains on the southern slopes of the Himalayas, in the Orinoco and Amazon valleys, on the Guinea coast of Africa, on the East Indies, and on the extreme southern part of North America. 202 a.
- For the rainfall of the central belt of North America. 202 f—221.
- For the scanty rainfall in the northern parts of North America and Eurasia. 202 g.
- For the Sahara desert and the great desert area of Asia. 215—229 f.

Wind Chart.



See pp. 40 and 41.

- | | |
|------------------------|------------|
| 1. Polar Winds— | no. 217. |
| 2. Westerly Winds— | no. 216. |
| 3. Calms of Cancer— | no. 212. |
| 4. North-east Trades— | no. 214. |
| 5. Equatorial Calms— | no. 212. a |
| 6. South-east Trades— | no. 214. |
| 7. Calms of Capricorn— | no. 212. |
| 8. Westerly Winds— | no. 216. |
| 9. Polar Winds— | no. 217. |

beds.

260. Silver, a white, ductile metal, is sometimes found native, but more commonly in combination, or as silver ore.

261. Gold and silver are converted into coin and manufactured into many useful and ornamental articles.

262. Gold and silver are found in nearly all the mountain regions of the world.

The United States, Australasia, and South America are the chief gold-producing countries, and Mexico and the United States lead in the production of silver.

263. Platinum is a steel-gray ductile, malleable metal, intermediate in value between silver and gold. It is used largely for chemical vessels and making electric connections.

The greatest commercial supply is obtained from the Ural Mountains.

264. Aluminum, an ingredient of common clay, is a lustrous, nearly white, very malleable and ductile metal, widely used in the arts.

265. Zinc is a white metal found chiefly in Europe and America.

266. Brass is copper alloyed with zinc.

267. Bronze is tin alloyed with copper, to which zinc is sometimes added.

268. Pewter and solder are tin alloyed with lead.

"Oh for festal dainties spread,
Like my bowl of milk and bread,
Pewter spoon and bowl of wood."

Whittier.

How is solder used?

269. Lead, a soft, very heavy, ductile, and malleable metal, is seldom found native but its ores are common.

The United States and Spain lead in its production.

270. Nickel is a silver-white, hard, ductile, and malleable metal of the iron group; it has a lustre surpassing that of silver.

It is mined chiefly in the United States and Europe.

271. Tin is a white, malleable metal found in nature chiefly in combination, rarely native.

The Straits Settlements rank foremost in the production of tin.

272. Mercury, or quicksilver, is the only liquid metal. It is used chiefly to separate gold and silver from their ores, and in thermometers and barometers. It is sometimes found native but mostly in combination with cinnabar, one of its ores from which it is

obtained by distillation.

271. Arsenic is an active poison. It is not a metal, but found in combination with silver, nickel, iron, sulphur, etc. It is very brittle and of a steel-gray color and brilliant luster. It is used in medicine and employed in the arts.

Building Material.

† 272. The principal kinds of stone used as building material are limestone, marble, granite, sandstone, and slate.

† 273. A quarry is a place where stone is taken from the earth. Quarrying is the process of taking or digging stone from the earth.

Try to get samples of each of these kinds of stone.

† 274. Limestone is lime hardened to rock formed of lime contained in the shells of little creatures that lived in the seas ages ago. As these little creatures died, the shells sank to the bottom, making a thick bed, which in time formed hard rock. Page 43, No. 236, b.

Some limestone is made of coral.

† 275. Granite and marble are formed from limestone, which, under great pressure, has been changed by the action of heat and water.

Like most of the minerals, they are found in mountain ranges.

† 276. Granite and marble are not only used for building purposes, but are also carved into beautiful statues, because they are so very hard and take a fine polish.

Fine statuary marble is obtained from Carrara, Italy; ornamental marble from the eastern United States. There are also valuable granite quarries in the eastern United States.

† 277. Sand is a hard, granular material, finer than gravel and coarser than dust. Page 43, No. 236 a.

† 278. Sandstone is formed of deep beds of sand in water, hardened to rock.

† 279. Sandstone is very useful for making walls of buildings.

† 280. Glass is pure sandstone melted.

It is the quartz sand in the sandstone that melts to form glass.

† 281. Slate is formed when beds of clay harden into thin smooth layers. Page 43, No. 236, b.

† 282. Slate is used for covering roofs of houses and as flagging for sidewalks. For what other purposes is it used?

Fine quarries of slate are found in the Eastern States.

† 283. Stones for building purposes are found in most of the countries of the world.

Precious Stones.

284. A gem is a precious stone cut and polished.

285. The precious stones include the diamond, ruby, sapphire, emerald, topaz, amethyst, and turquois.

286. The diamond (crystallized carbon) is a usually colorless stone, excelling in brilliancy, and is the hardest substance known.

The richest diamond mines are in South Africa, Brazil, and India. Amsterdam and Antwerp lead in the cutting of diamonds. New York ranks next.

287. The ruby (crystallized corundum) is a transparent stone of a carmine red color.

Corundum is the hardest substance next to the diamond.

Burma, southeastern Asia, produces the finest rubies.

288. The sapphire (crystallized corundum) is a transparent, usually blue stone.

The main sources of sapphire are Ceylon and southeastern Asia.

289. The emerald is a precious stone of a rich green color, which, when flawless, ranks with the diamond.

The chief source of the emerald is Colombia, South America.

290. The opal is an opaque stone variable in color.

In ancient times it was supposed to have magical virtues.

Its principal sources are Hungary and Australia.

291. The amethyst is a violet or purple variety of crystallized quartz.

It is widely distributed. The finest amethysts come from South America, Asia, and the United States.

It was worn by the Greeks in the belief that it lessened the intoxicating effects of alcoholic drinks.

292. The turquois (first brought from Turkey) is a stone having a waxy luster. Its color varies from a dull green to a beautiful pale blue.

The chief turquois mines are in Persia and America.

293 The garnet, when cut and polished, bears some resemblance to the ruby in color, transparency, and luster.

The most valued garnet is obtained from Ceylon, Bohemia, and Hungary.

294. The pearl, largely used as a gem, is a shelly concretion having a brilliant luster with varying tints, found in the shells of pearl-oysters and other mollusks.

The oldest fisheries are those of Ceylon. In America the most important fishing ground is that in the Gulf of California.

295. Agates of rare beauty occur in central Asia, and in profusion on the shores of Lake Superior.

296. Fine Carnelians come from Nova Scotia, Brazil, Uruguay, Arabia, and India.

What are made of agate and carnelian?

Agates and carnelians are widely distributed.

Plants and Animals.

† 297. By flora we understand the vegetable growth of the earth.

† 298. By fauna we understand the animal life of the earth.

† 299. Plants and animals adapt themselves to various climes:

a. The palm trees of the tropics have long, bare elastic trunks that bend unharmed before hurricanes which would tear up a tough oak or pine of the temperate zone by its roots.

b. The wide-spreading tops of the palm trees would be crushed and broken by the weight of the snow, if they grew in cold climates while the snow falls off quickly from our cone-shaped spruce trees with their drooping branches and needle-like leaves, or from our leafless deciduous trees; such as the oak, poplar, etc.

c. The polar bear with its warm coat of fur and the eider duck in its downy wrap would fare sadly in a tropical climate, while the monkey would forget its pranks and the mocking-bird its song, were they to be transferred to the rigid climate of the frigid zones.

† 300. Barriers to the distribution of plant and animal life are the sea, mountains, and deserts.

† 301. a. The plant and animal life of Australia is unlike that of any other part of the world, which is due to the fact that Australia has been very long separated from Eurasia by the sea.

b. The mountains of Asia separate the life forms of northern and southern Asia, so that they are quite unlike each other.

For the distribution of plant and animal life see pp. 9—10 Nos. 41--43.

POLITICAL GEOGRAPHY.

See "General Definitions."

But noblest of the noble works that grace Creation's plan,
 Sublimest of thy works sublime, thy masterpiece is Man.

ODE TO CREATION'S GOD.

Man.

† 1. Man originally lived in Paradise, which is supposed to have been located in western Asia.

† 2. The population of the globe comprises about 1,600 million of people.

Races of Mankind.

† 3. Mankind is divided according to form, feature, and color, into five great races: the Caucasian, the Mongolian, the Malay, the American Indian, and the Ethiopian.

† 4. a. The Caucasian, or white race is of a fair complexion, with wavy hair and regular features.

b. All the nations of Europe except the Turks, Lapps, and Finns, belong to this race; also most of the people of North and South America, and many of the people of Asia, Africa, Australia, and some of the islands.

† 5. a. The Mongolian, or yellow race, is of an olive-yellow color, with coarse hair, irregular features, and black obliquely-set eyes.

b. This race occupies a large part of Asia and includes the Esquimos of America, and the Turks, Finns, and Lapps of Europe. The Japanese and Chinese are the leading nations belonging to this race.

† 6. a. The Malay, or brown race, is of a complexion varying in color from olive-yellow to black, with curly hair, and irregular features.

b. This race occupies the Malay peninsula and most of the islands of the Pacific, but is decreasing before the advance of European colonization.

† 7. a. The Indian, or red race, has a copper-colored or dark complexion, coarse hair, and irregular features with small, intensely black eyes.

† b. This race is found in many parts of the New World, particularly in Mexico and in Peru.

The American Indian and the Malays are now supposed to be remote branches of the Mongolian race, and the Esquimos, a branch of the Red race.

† 8. a. The Ethiopian, or black race, has a black or dark skin, frizzly hair, and irregular features.

b. This race is found chiefly in Africa. Its descendants in North and South America are quite numerous.

Conditions of Society.

† 9. According to the different social conditions, mankind may be divided into four classes: savage, barbarous, half-civilized, and civilized.

† 10. a. Savages live by hunting and fishing, wear the rudest kind of clothing and live in the rudest kind of dwellings.

b. The natives of Africa, of the islands of the Pacific, some of the American Indians, and the Eskimos are still in a savage state.

† 11. a. Barbarous people live chiefly on the products of their herds and flocks. They join in tribes under a ruling chief, and have no permanent homes, but wander from place to place to find pasturage for their cattle, sheep, and goats.

b. The Arabs of Asia and Africa belong to this class.

† 12. a. Half-civilized people have towns and cities, understand many arts, have a written language, and have made considerable advancement in intelligence and morality, but their civilization has become stationary.

b. The Chinese and Turks are examples of half-civilized people.

† 13. a. Civilized, or enlightened nations, are characterized by their knowledge of the arts and sciences, their education, literature, capability of self-government, and general progressiveness.

b. Most of the white people have reached this stage of culture.

Few progressive nations are found in the torrid zone where food and clothing are obtained with but little exertion,

The most perfect types of man and all the great nations of the earth are found in the north temperate zone, where extremes of climate demand the greatest skill and energy.

What would you say of the people of the frigid zones?

Religions.

* 14. It is natural for man to believe in a higher Being, and all nations have some form of religious worship.

† 15. The principal forms of religion are Christianity, Judaism, Mohammedanism, Buddhism, and Brahmanism.

* 16. a. Christianity teaches the belief in one God and in Christ as the Son of God and Savior of the world. It accepts the Old and the New Testament as the word of God.

It is the prevailing religion of the leading nations of the world, and is professed by about one-third of the inhabitants of the globe.

b. Among the believers in Christianity, are the Roman Catholics, the Protestants, and the members of the Greek Orthodox church.

c. The Roman Catholic, the only true religion, prevails in the Latin countries and Austria of Europe, and in South America and Mexico. It has by far more adherents than any other form of religion; (about 264 million in 1900). In the United States the Roman Catholics number about 14 million. (1909.)

† 17. a. Judaism is the ancient religion of the Jews, or Hebrews, who believe in one God and accept the Old Testament, but maintain that the Savior is yet to come.

b. The Jews are found everywhere in the civilized world, but nowhere in great numbers or as a nation.

† 18. a. Mohammedanism teaches the belief in one God and Mohammed as God's greatest prophet. The Koran, written about six hundred years after Christ, is the Bible of its followers.

b. Mohammedanism prevails among the half-civilized nations of Africa and southern Asia. (The Turks, Arabs, Persians, etc.)

† 19. a. Buddhism, founded by Buddha,* counts as its followers one-third of the human family. They do not believe in any God, but insist on the practice of charity.

b. Most of the people of eastern and southern Asia are Buddhists.

† 20. a. Brahmanism is a form of idolatry. It divides its people into castes. The members of one caste cannot associate or intermarry with those of another caste.

b. Brahmanism is the religion of most of the inhabitants of India, from which they drove most of the Buddhists by persecution.

Governments.

† 21. Government is the organized power by which a state or nation manages its affairs.

† 22. The principal forms of government are the republican and the monarchical.

† 23. A monarchical form of government is one in which the authority to govern is vested in one person called emperor, king, queen, etc.

† 24. Monarchies are either absolute or limited:

a. An absolute monarchy is a government in which the ruler makes and enforces the laws at his pleasure.—Russia, Turkey.

b. A limited monarchy is a government in which the laws are made by representatives of the people and enforced by the ruler.—Germany, Great Britain, Japan, etc.

All important monarchies of the present day are limited. Why?

† 25. A republic is a government in which the people are governed by representatives chosen by themselves.—United States, France, Mexico, etc.

Our government is called a Federal Republic, because it is a republic arising from the federation, or union, of many smaller republics, called states.

† 26. An empire is a monarchy which usually comprises several nations.

† 27. A kingdom is a monarchy ruled by a king or a queen.

The ruler of Russia is called a czar.

The ruler of Turkey is called a sultan.

The ruler of Persia is called a shah.

The ruler of Egypt is called a khedive.

The ruler of Japan is called a mikado.

The ruler of a principality is called a prince.

A principality is the territory of a reigning prince, or the one that gives to a prince a title of courtesy; as, the principality of Wales.

† 28. The capital of a country or state is a city where the laws are made.

† 29. A county is a subdivision of a state.

† 30. A city is a collective body of inhabitants, incorporated and usually governed by a mayor, aldermen, and a common council. The requisite number of inhabitants in the United States varies from 3,000 upwards.

† 31. The metropolis of a country or state is its largest city.

† 32. A seaport is a place on or near the sea, having a harbor that can accomodate vessels.

† 33. A town in general means any collection of dwelling houses larger than a village and not incorporated as a city.

† 34. A town, or township, (United States) is a subdivision of a county, usually six miles square. The inhabitants of a township are invested with certain powers for regulating their own affairs; such as, repairing roads, providing for the poor, etc.

Industries.

* 35. The production of raw material for food, clothing, and shelter gives rise to nine great industries.

* 36. Agriculture is the cultivation of the soil for the production of food.

* 37. Herding is the raising and breeding of animals for their flesh, wool, hair, or other products.

* 38. Fishing is the procuring of water products; such as, fish, oysters, clams, lobsters, pearls, and sponges.

The object of hunting and trapping is the capture of wild animals for the sake of meat or fur.

* 39. Mining is the procuring of minerals from the earth.

* 40. Lumbering is the securing of logs from the forests, and the preparation of them for the market.

* 41. Manufacturing is the making of useful articles from raw materials.

* 42. Transportation is the carrying of persons and products from one place to another.

* 43. Commerce is the exchange, or purchase and sale, of commodities.

Domestic commerce is carried on between parts of the same country.

Foreign commerce is carried on between different countries.

* 44. A professional industry is any occupation which serves the needs of society and which requires special mental training and skill.

Clergymen, teachers, lawyers, physicians, scientists, architects, artists, authors, etc., are professional workers.

COMMERCIAL GEOGRAPHY.

See "General Definitions".

For Commerce traffics with the world at large;
O'er lakes and seas her gallant ships do glide.
She rules supreme o'er harbors and o'er marts,
And sends her sea-borne riches far and wide.

† 1. What is commerce?

† 2. What is transportation?

What necessitates transportation? What is a port or seaport? A harbor? P. 32, No. 132. A wharf? P. 32, No. 133.

† 3. Imports are the goods brought into a country.

What imported articles might be found on your dinner table?

† 4. Exports are the goods sent out of a country.

† 5. The land routes of transportation are trails, roads, and steam and electric railways.

† 6. A trail is a mere footpath, used only by man and by the more surefooted among the beasts of burden.

7. Farm roads, or public highways, are the trade routes between the country and city. On these roads horses serve for transport.

Our country has about 3,000,000 miles of wagon roads.

8. Railroads are rapidly diminishing the inland water trade because they save time and carry freight at cheaper rates than in former years.

Most of the railroads in the world are in the United States and Europe. The United States has about 200,000 miles of railroad. The total railroad mileage of the globe is nearly 500,000 miles.

† 9. Electric street cars convey passengers to their destination.

10. The government usually owns the railroads in Germany and some other European countries.

11. Private corporations own the railroads in the United States. These corporations obtain charters for operating their railroads from the states through which they pass.

† 12. The camel, justly called the "ship of the desert", is employed in desert regions, both on account of the heavy load it can carry (500 to 1000 pounds), and because it is able to go for a long time with little food and water.

† 13. A caravan is a company of travelers, pilgrims, or merchants, travelling together through deserts, etc., as in Asia, Africa, and Australia. Also a camel train in the desert.

† 14. Dogs and reindeer are used as means of transportation in the

arctic regions.

† 15. Pack-mules and llanas are employed in mountain regions.

16. The yak carries all goods in Tibet.

On the plains of India the ox is used to draw wheeled conveyances. The elephant is also employed as beast of burden in some regions. Why is the elephant not a profitable beast of burden.

17. The earliest method of transportation was by human beings. Where it is difficult to build or keep up roads, or where human labor is abundant and cheap, men still are the burden carriers.

In tropical Africa the negroes carry the ivory and other jungle products, and in tropical South America the Indians carry the rubber. In China and Japan men carry passengers and freight.

† 18. Transportation by water is both oceanic and inland, and is carried on by means of steamships, sailing vessels, and canal boats.

† 19. The oceans form the main highways of foreign commerce between countries far distant from one another.

† 20. Numerous steamship lines cross the Atlantic in regular routes between all the more important ports. The lines crossing the Pacific are not so numerous as those crossing the Atlantic. Why?

Where would a vessel, bound from North America to Asia or Australia, likely stop?

Why has the Mediterranean, from an early date, had a great traffic?

† 21. Rivers are natural highways and, if deep and slow, are very useful routes of trade, especially if they flow through densely peopled and productive regions.

The Mississippi, with its great branches, penetrates far into the interior of the United States, and is used as the natural channel by which a large portion of the products of the vast western prairies are sent to other parts of the world. Name products of the western prairies.

† 22. Large lakes and inland seas, if favorably located, are important trade routes.

Why are the Great Lakes of our country of more value to trade than any other lake or river route in the world?

Transportation by water is cheaper than transportation by rail.

† 23. What is a canal? Pp. 31, 32, Nos. 129, 130.

Canal boats are moved by horses and mules and sometimes by steam.

24. Important canals:

a. Suez Canal, connects Port Said on the Mediterranean Sea with

Suez on the Red Sea. 31 feet deep, 420 feet wide, and 90 miles long.

b. The Manchester Canal connects Manchester with Liverpool and the Atlantic ocean. $35\frac{1}{2}$ miles long.

c. The Kaiser Wilhelm Canal connects the Baltic and North seas through Germany. 61 miles long.

What is the object of this canal?

d. The Welland Canal connects Lake Ontario and Lake Erie. 27 miles long.

On what side is this canal? What is its purpose?

e. The Sault Ste. Marie Canals are adjacent to the falls of the Saint Marys river, which connects Lake Superior and Lake Huron. The canal belonging to the United States is about a mile long and the one belonging to Canada is a little longer.

f. The Panama Canal will connect the waters of the Pacific with the Atlantic. When completed it will be 49 miles long, over 200 feet wide, and about 45 feet deep.

This canal will work great changes in the commerce of the world. It will enable our eastern ports to compete on even terms with the great ports of Europe in the commercial operations with China and Japan.

† 25. Aids to commerce are mail facilities, wire and wireless telegraphy, telephone, submarine cables, typewriter, etc.

Tell how each is helpful in commercial transaction.

There is hardly any part of the civilized world that cannot be reached by wire.

† 26. Custom houses are buildings along the coast, where vessels must first land. Here the cargo is examined, and the duties calculated and paid.

27. A duty, or tariff, is tax upon imported goods.

28. A tariff for protection has an eye to two things: revenue and protection to our own industries, and is so levied as to admit free the products we cannot produce and tax those products of other nations that we can produce.

† 29. A consul is an officer appointed to reside in a foreign port, chiefly as the representative of his country's commercial interests. It is his duty to look after our interests, to protect our rights, and from time to time to furnish valuable information.

The United States has a consul in each important city of the leading countries.

In the capital or leading trade center of large countries this officer is called consul general; in other cities consul.

† 30. The governments regulate commerce. They promote the building of good roads; they build lighthouses at dangerous points and at harbor entrances; they deepen harbors and rivers; they build and maintain navies to protect their shipping and commerce.

Which is the cheaper inland transportation, by water or by land?

Why are railroads fast taking the trade away from rivers and canals?

The distribution and transportation of the various commercial productions can be studied under the different countries.

QUESTIONS FOR CLASS USE.

General Definitions.

* Recite lines.

* 1. Define Geography.

2. On what does each, mathematical, physical, political, and commercial geography treat?

6. What is the solar system? * A planet?

Mathematical Geography.

* 1. What is the earth? Its shape?

† 3. Give five proofs that the earth is round.

4. Define * horizon, † zenith, † nadir.

† 7. What is the circumference of the earth? The diameter? The surface area?

† 8. Name and define the two movements of the earth.

† 9. What is the chief effect of rotation?

Explain how rotation is a means of measuring time and * determining the cardinal points.

* 10. In what three ways may direction be told? What is the compass?

11. What is the circle of illumination?

* 12. Define axis, poles. Recite stanza.

† 14. What does revolution effect?

Natural, Astronomical, and Artificial Facts.

† 15. What are the means for describing the location of places on the earth's surface? * What is a map?

16. Define * globe, † great circle, * hemispheres.

* 18. What land masses does the Western Hemisphere contain? The Eastern? In what other manner may the earth be divided into hemispheres?

† 19. Define small circle, parallels, tropic of cancer, tropic of capricorn, arctic circle, antarctic circle, * equator, meridian circles, meridians, prime meridian, latitude.

† 30. What is the latitude of the equator? The tropic of cancer? The arctic circle? The north pole? The tropic of capricorn? The antarctic circle? The south pole?

31. † What is the greatest latitude a place can have? The distance in miles from the equator to either pole?

† 33. Define longitude.

34. What is the length of a degree of longitude at the equator? At the poles? Explain.

35. What is the greatest longitude a place can have?

36. What is the international date line?

37. What point has no latitude or longitude?

38. What is the longitude of the prime meridian?

* 39. What are zones? Name the zones in order from north to south.

* 41. Discuss the seasons. Plants and animals of the frigid zone. Of the temperate zones. Of the torrid zone.

The Seasons. Page 11.

* 43. What can be said of the inclination of the earth's axis? Of the plane of its orbit? Of its orbit? Of the causes of the seasons?

* 47. Discuss the change of seasons.

48. * Define equinoxes. Solstice. Antipodes.

† 51. How does the direction of sunset vary during the different seasons?

§ 52. Describe the midnight sun. The Aurora Borealis.

United States Land Survey. Page 14.

55. By whom devised?

56. Define town or township. Range. Principal meridian. Base line. Section. Correction lines. Sketch and analyze diagrams to illustrate how townships and ranges are designated. How correction lines are drawn. How townships and sections are divided and described.

Give the answers to the search questions on page 16.

Physical Geography. Page 17.

Recite stanza.

* 1. Of what is the surface of the earth composed? What part land? Water?

* 2. How is the land subdivided?

* 4. How are the bodies of water classified?

The Land. Page 17.

* 5. Define continent. Name the continents in order of size.

7. * What is an island? † Locate the three largest.

† 9. What are continental islands? Name and locate such.

† 11. What are oceanic islands? Illustrate.

† 13. What are coral islands? Illustrate.

15. What are volcanic islands? Name and locate some.

- † 17. What are reefs? Illustrate.
- † 19. What are keys? Illustrate.
- 21. Define atoll, lagoon. Illustrate.
- * 24. What is an archipelago? Name and locate some.
- * 26. What is a peninsula? Name and locate peninsulas of † North America.
- † Of Europe. † Of Asia.
- 30. Define * cape, † spits, † hooks or bills.
- † 34. Name and locate extremity capes of North America. Of South America. Of Africa. Of Europe. Of Asia. Of Australia.
- * 40. What is an isthmus? Name and locate three. † How are isthmuses often made useful to commerce?
- * 43. Define coast, shore, bank, † coastline.
- † 45. Discuss regular and irregular coastline.

Divisions of Land According to Elevation. Page 22.

- * 46. Define hill, mountain, mountain peak. † Name and locate the highest peak of each continent.
- * 50. What is a mountain range? A mountain system? † Illustrate each.
- † Name and locate the loftiest mountains in the world.
- * 53. What is a plain? Illustrate.
- * 54. What is a plateau? Illustrations.
- * 56. What is a water-shed? † Illustrate.
- † 58. What is meant by the relief of a country?
- † 59. Toward what ocean is the highland side of each continent? The long, gentle slopes?
- 61. * What is a volcano? What is the cause of volcanic eruptions?
- 63. * Discuss the two great series of volcanoes.
- 64. † Name and locate noted volcanoes. Name volcanic eruptions of historic importance.
- 66. * What is an earthquake? Cause? Where common, etc.?
- 69. Tell of destructive earthquakes.
- * 70. Discuss prairies. † Great Plains. † Llanos. † Pampas. † Silvas.
- † Steppes. † Tundras. * Swamps. † Name and locate some swamps.
- 79. * What is a valley or basin? Give and locate examples of the world's large valleys.
- * 81. What is a canon? † Illustrate.
- † 83. What is a pass or gap? * A desert? † Illustrate each. * What is an oasis?

Subdivisions of Water.

Oceanic Waters. Page 26.

- 87. * What is the sea or ocean? † Its depth? † Describe its bottom. † How divided?

91. Describe briefly each of the five oceans, touching on size and boundaries.
- † 96. What are the three movements of the sea?
97. * What are waves? † Breakers? † Beach? † Shoals? † Tides? † What is high or flood tide? † Low or ebb tide? What are spring tides? Neap tides?
106. What can be said of the height of a great tidal-wave?
107. What are ocean currents? Warm currents? Cold currents? Discuss the Gulf Stream. The Japan Current. The Labrador Current. The Peru Current.
110. Discuss the influence of ocean currents on climate, navigation, distribution of life forms, and health.
111. * What is a sea? † Locate a sea of the Western Hemisphere. † Seas in or bordering Europe. † In or bordering Asia. Seas partly enclosed by the East Indies.
- * 116. What is a gulf or bay?
- † 117. Locate gulfs and bays indenting North America. Europe. Asia. Africa.
- † 121. Define bight. Illustrate.
123. * What is a strait? † Locate six important straits. † Trace a water route from North Cape to the Sea of Azof.
126. * What is a channel? † Locate two.
127. * What is a sound? † Locate three.
129. * What is a canal? † Locate two.
131. † Define frith, frith, fiord, or inlet. * Harbor or haven. * Dock or wharf.

Continental Waters. Page 32.

- * 134. Define river, creeks, brooks, rills. How may a river be formed?
- * 137. Define source, tributary, right bank, left bank, mouth, bed, confluence or junction.
- † Locate Pittsburg, Buffalo.
145. * Define delta. † Name and locate noted deltas.
147. Define bayou, oxbow loop, oxbow lake.
150. * What are levees or dikes? Illustrate.
- † 152. Define dalles or gorges. Alluvial land. * River system. * River basin.
- † Locate some of the largest rivers of each continent.
157. † What are rapids or cascades? * What is a cataract or waterfall?
- † 159. Locate three famous cataracts.
160. † What is a glacier? Discuss the glacial period.
163. * What is an iceberg? † An avalanche? * A pond? * A lake? † How are lakes classified? † What is a salt lake? † A fresh-water lake?
170. Locate the largest fresh-water lake of each continent.
171. * What is a spring? † How formed? † What are mineral springs? How do mineral springs determine the location of cities? Locate some mineral springs.
175. What are hot springs? Locate some.
177. † What is a geyser? Locate noted geysers.

The Atmosphere. Page 37.

179. † Define atmosphere. * Air.
 † 181. What is the weight of air pressure? † How is air pressure measured?
 † 183. What is a barometer and how used?
 † 185. How is the temperature of the atmosphere measured? How is the thermometer used? Describe it.
 § 187. Discuss the different kinds of thermometers.

Waters of the Atmosphere. Page 38.

- * 188. What causes water to take the form of vapor? What is vapor? Which holds more water, warm or cold air?
 † 191. Explain what is meant by dew-point. What are formed when the air becomes cooled below the dew-point?
 * 193. Define dew. Fogs and mists. Clouds. † How are clouds classified?
 197. * What is rain? * Snow? * Frost? * Hail? What does rainfall include?

Distribution of Rainfall. Page 38.

202. Account: a. For the rains likely to occur in the equatorial calm belt. b. For the abundant rains on the windward slopes of the mountains of the torrid zone. c. For the little or no rain in the tropical calm belts. d. For the ample rainfall on parts of the western coasts of the continents. e. For the rainy seasons caused by the monsoons. f. For the cloudy, rainy, or snowy weather caused by cyclones. g. For the little or no rain in the polar regions.
 † 203. What amount of rainfall is necessary for the growth of crops? What is irrigation? Answer questions following this number, pages 39, 40.
 † 205. Define lightning, thunder, rainbow.
 † 208. How may the colors of the spectrum be produced? What are the colors of the spectrum or the rainbow?

Winds. Page 40.

209. * What is wind? † How does heat make the air light, and cold make it heavy? What are calm belts? Discuss the three calm belts.
 213. Discuss fully, the trade winds, the prevailing westerly winds, the cold polar winds, monsoons.
 219. How do the wind belts shift?
 220. What are cyclones? How do highlands and cyclones influence rainfall?
 222. Define and locate: hurricanes, tornadoes. How are storms caused?
 225. Define simoon. Blizzard.

Climate. Page 42.

- * 227. What is climate? † Mention six conditions that modify climate and tell how each affects it.

Soil. Page 43.

230. What is * soil? † Subsoil? What agents form soil? Explain.
- † 236. What are the three kinds of soil? Distinguish between fertile soil and barren soil.

Mineral Productions. Page 44.

239. How may mineral productions be arranged?

Minerals.

240. † What is coal? † Its origin? What are the three kinds of coal? † What country leads in the production of coal?
243. What is peat? Coke? Charcoal?
246. † What is the origin of petroleum and natural gas? How obtained? What is made from petroleum? Where are the two chief petroleum regions in the world? For what purposes is natural gas used?
250. What is salt? Sulphur? Graphite?

Metals. Page 45.

254. What is ore? Smelting? † What can you say of iron? † What countries rank foremost in its production?
- † 256. What is steel? Copper? What country surpasses all others in the production of copper?
261. What can be said of the usefulness of gold and silver? Describe each. For what purposes is each used? Where is gold found?
263. What is platinum? From where obtained?
264. What is aluminum? Zinc? Brass? Bronze? Pewter and solder? How is solder used?
269. What is lead? Nickel? Tin? Mercury, or quick-silver? Arsenic?

Building Material. Page 49.

- † 272. What are the principal kinds of stone used as building material? What is a quarry?
- † 274. What is limestone? Granite and marble? From where is fine statuary marble obtained? Ornamental marble? Locate valuable granite quarries.
- † 277. What is sand? Sandstone? For what is sandstone useful?
- † 280. What is glass? How is slate formed? For what purposes is it used? Locate fine slate quarries.
- † 283. How are stones for building purposes distributed?

Precious Stones. Page 50.

284. What is a gem?
285. Name some precious stones. Describe the diamond. Locate rich diamond mines. What cities lead in the cutting of diamonds? What is the ruby? What country produces the finest rubies? What is the sapphire? Where are its main

sources? Define and locate the principal sources of the emerald. The opal. The amethyst. The turquoise. The pearl. Agates. Carnelians.

Plants and Animals. Page 51.

- † 297. What do we understand by flora? By fauna?
- † 299. Illustrate how plants and animals adapt themselves to various climes.
- † 300. What are barriers to the distribution of plant and animal life? Illustrate.
- * Name the principal plants and animals of the frigid zone. The torrid zone. The temperate zones. Pp. 9—11, nos. 41—43.

Political Geography.

Man. Page 52.

Recite rhyme.

- † 1. Where was the original home of man?
- † 2. What is the population of the globe?

Races of Mankind.

- † 3. How is mankind divided according to form, feature, and color?
- † 4. Describe the five races of mankind.

Conditions of Society. Page 53.

- † 9. How may mankind be divided according to social conditions? Define and illustrate each of the four stages of culture. Why are few progressive nations found in the torrid zone? In what zones are all the great nations of the earth found?

Religions. Page 54.

- 14 * What is natural for man? † What are the principal forms of religion? * Discuss Christianity. † Judaism. † Mohammadanism. † Buddhism. † Brahmanism.

Government. Page 55.

- † 21. What is government? What are the principal forms of government? Describe and illustrate each form.
- † 26. What is an empire? A kingdom? What is the ruler of Russia called? Of Turkey? Of Persia? Of Egypt? Of Japan? Of a principality?
- † 28. What is the capital of a country? What is a county? A city? The metropolis of a country? A seaport? A town? A township?

Industries. Page 56.

- * 35. What gives rise to the nine great industries? What is agriculture? Herding? Fishing? Mining? Lumbering? Manufacturing? Transportation? Commerce? A professional industry?

Commercial Geography. Page 57.

† What is commercial Geography?

† Recite verse.

† 1. What is commerce? Transportation? A seaport? A harbor? A wharf?

† 3. What are imports? Exports? Land routes of transportation? What is a trail? What are railroads doing? Which countries have the greatest extent of railroad? What is the total railroad mileage of the globe? Of what use are electric street cars?

10. Who owns the railroads in Germany and other European countries? In the United States?

† 12. Where is the camel employed?

13. † What is a caravan? † Where are dogs and reindeer used as means of transportation? † Pack-mules and llamas? The yak? The ox? The elephant? What was the earliest method of transportation? Where is this method still used?

† 18. Of what two kinds is transportation by water? Discuss oceanic transportation.

† 21. What are the natural highways of inland transportation? Illustrate.

23. † What is a canal? Name and locate the important canals of the world.

† 25. Mention the aids to commerce, and state how each is helpful in commercial transactions.

† 26. What are custom houses?

27. What is a duty or tariff? A tariff for protection? † A consul?

† 30. What interest do the governments take in commerce? Which is the cheaper inland transportation, by water or by land? Why are railroads fast taking the trade away from rivers and canals?

North America.

America of the northern Zone, proudly I call thee my native home!
All that is thine of Wisdom speaks—thy tow’ring hills, thy snow-capped peaks,
Thy mines of wealth, thy mighty streams, thy forests, plains, and fields so
green,
Thy waterways thro’ lakes so grand, thy rock-bound coast and ocean strand,
Bespeak the Providence divine that watches o’er this northern clime.
Cradled and rocked in oceans three, Nature bestowed all gifts on thee!
Before thee let the nations bow, Queen of the continents art thou!

What and Where?

Mathematical Geography of North America.

All IV. Grade work excepting numbers marked with ||.

1. North America is the third in size of the continents, and has more than twice the area of Europe. It is located in the northern part of the Western Hemisphere; and extends from the Arctic ocean almost to the equator, and from the Atlantic to the Pacific ocean.
2. 5,000 miles is its approximate greatest length.
3. 3,000 miles is its approximate greatest width.
4. One-sixth. North America contains about one-sixth of the land mass of the globe. (Over 9,000,000 sq. miles.)
5. 8° and 72° . North America lies between 8° and 72° north latitude; hence it extends through $(72^{\circ}-8^{\circ})$ 64° of latitude.
6. 55° and 167° . North America lies between 55° and 167° west longitude; hence it extends through $(167^{\circ}-55^{\circ})$ 112° of longitude.
7. 40° . The parallel of 40° north crosses central North America, southern Europe, and central Asia.
It is the latitude of Philadelphia, Penn. and of Peking, China.
8. The Arctic Circle is one of the four important small circles. It is $23\frac{1}{2}^{\circ}$ from the north pole, and $66\frac{1}{2}^{\circ}$ north of the equator, and crosses northern North America, Europe, and Asia.
9. The Tropic of Cancer is one of the four important small circles. It is $23\frac{1}{2}^{\circ}$ north of the equator and crosses southern North America, northern Africa, and southern Asia.

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Physical Geography of North America.

Bounding Waters. Winds.

10. Arctic ocean, page 27. No. 95.
11. Atlantic ocean, p. 27, no. 92.
12. Pacific ocean, p. 26, no. 91.
- || 13. Labrador Current, p. 28, no. 109 a.
- || 14. Bering Strait Current, p. 29, no. 110 a. (Last sentence.)
- || 15. Japan Current, p. 28, no. 108 c.
- || 16. California Current, a branch of the Japan Current, follows the southwestern coast of North America. See chart p. 46.
- || 17. Gulf Stream, p. 28, no. 108 b.
- || 18. Trade winds, p. 41, no. 214.
- || 19. Calms of Cancer, p. 40, no. 212. (Last sentence.)
- || 20. Prevailing Westerly winds, p. 41, no. 216.

From Bering Sea to Bering Sea.

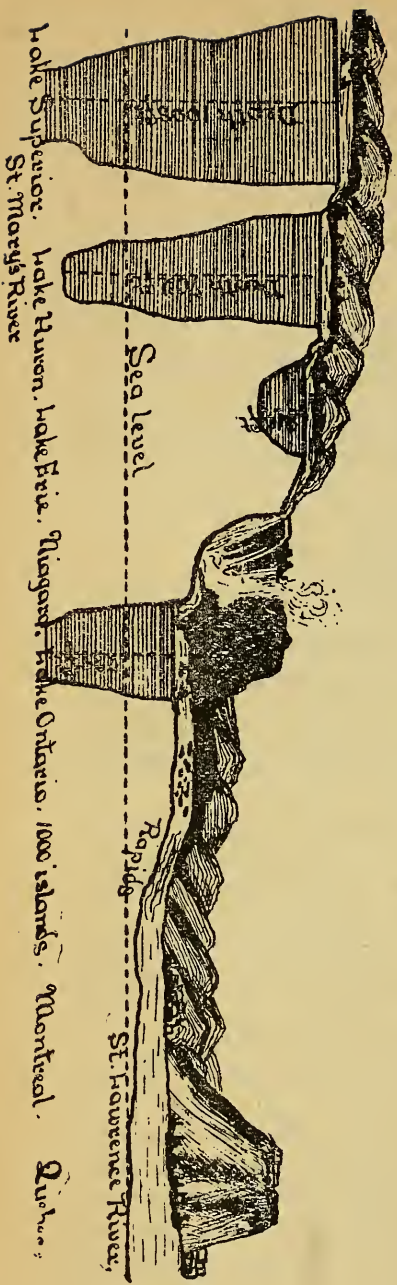
Seas, Gulfs, Bays, Sounds, and Straits.

(Define each.)

21. Bering sea, northwest of North America, is enclosed by North America, the Aleutian Islands and Asia, and is separated from the Arctic ocean by Bering Strait.
22. Norton sound is an arm of Bering sea; it indents western Alaska.
23. Bering strait connects Bering sea and the Arctic ocean; it separates North America from Asia.
24. Banks strait connects the Arctic ocean with Melville sound, and separates some of the western islands of the Arctic archipelago.
25. Melville sound is located in the Arctic archipelago.
26. Baffin bay is an arm of the Arctic ocean, and separates Greenland from the Arctic archipelago.
27. Davis strait connects Baffin bay and the Atlantic ocean, and separates Greenland from the islands of the Arctic archipelago.
28. Hudson strait connects Hudson bay and the Atlantic ocean, and separates Labrador from the islands of the Arctic archipelago.
29. Hudson bay, with its arm, James bay, is an arm of the Arctic ocean and indents northeastern Canada.
30. Belle Isle strait connects the Gulf of St. Lawrence and the



The Great Lakes.





Atlantic ocean, and separates Newfoundland from Labrador.

31. St. Lawrence is a gulf; it is an arm of the Atlantic, and indents the southeastern Canadian coast; it is located at the mouth of the estuary of the St. Lawrence river.

Define estuary. P. 33, no. 147.

32. Fundy bay is an arm of the Atlantic, and indents southeastern Canada.

33. Chesapeake bay is an arm of the Atlantic and indents east-central United States.

34. Florida strait connects the Gulf of Mexico and the Atlantic ocean, and separates the West India islands from Florida.

35. Mexico, with its bay of Campeche, is a gulf; it is an arm of the Atlantic, and indents the United States and Mexico.

36. Yucatan channel connects the Gulf of Mexico and the Caribbean sea, and separates Cuba from Yucatan peninsula.

37. Caribbean sea, p. 29, no. 112.

38. Honduras is a gulf; it is an arm of the Caribbean sea, and indents Mexico and Central America.

39. Mosquito bay is an arm of the Caribbean sea and indents Central America.

40. Panama is a gulf; it is an arm of the Pacific, and indents southern Central America.

41. Tehuantepec is a gulf; it is an arm of the Pacific, and indents southern Mexico.

42. California is a gulf; it is an arm of the Pacific, and separates Mexico from its Californian peninsula.

43. San Francisco bay is an arm of the Pacific, and indents west central United States.

44. Juan de Fuca strait connects Puget sound and the Pacific ocean, and separates Vancouver island from the United States.

45. Puget sound is an arm of the Pacific, and indents north-western United States.

46. Bristol bay is an arm of the Caribbean sea; it indents southwestern Alaska.

From Alaskan Peninsula to Alaskan Peninsula.

Peninsulas, Capes, and Islands.

(Define each.)

47. Alaska is a northwestern peninsula projecting westward into

the Pacific ocean.

48. St. Lawrence is an island, west of Alaska, in the Bering sea.

49. Prince of Wales is a cape of northwestern Alaska, on Bering strait.

50. Lisburne is a cape of northwestern Alaska, on Bering strait.

51. Barrow is the most northern point of continental North America, Northern Alaska, on the Arctic ocean.

52. Arctic archipelago is a group of islands north of North America in the Arctic ocean.

53. Greenland. P. 18, no. 8 a.

54. Farewell is an extremity cape, southern Greenland, on the Atlantic ocean.

55. Iceland is an island of Danish America, east of southern Greenland, in the Atlantic ocean.

56. Labrador is a peninsula of eastern Canada, washed by the waters of Hudson bay, Hudson strait, Atlantic ocean, and the Gulf of St. Lawrence.

57. Chidley is a cape, northern Labrador, on the Atlantic ocean.

58. Newfoundland is an island east of Labrador, in the Pacific ocean, belonging to Great Britain.

What can be said of the climate? P. 28, no. 109.

59. Race is a cape, eastern Newfoundland, on the Atlantic.

60. Newfoundland Banks are elevated plateaus from 100 to 600 feet below water and rising from the bottom of the ocean. They are the largest and most valuable fishing grounds in the world.

61. Cape Breton is an island northeast of Nova Scotia, and separated from it by the Gut of Canso.

62. Nova Scotia is a peninsula of southeastern Canada projecting into the Atlantic ocean.

63. Sable is a cape, southern Nova Scotia, on the Atlantic ocean.

64. Cod is a cape, or hook, of Massachusetts, on the Atlantic.

65. Long Island is off the eastern United States coast, in the Atlantic ocean.

66. Hatteras is a cape, North Carolina, on the Atlantic ocean.

67. The Bermudas are a group of two hundred islands, six hundred miles east of South Carolina. They belong to Great Britain.

68. Florida is a southeastern peninsula of the United States projecting southward into the waters of the Atlantic and the Gulf of Mexico.

69. Sable is a southern cape of Florida peninsula, on the Atlantic.

70. Florida Keys are a chain of low coral islands at the extremity of the peninsula of Florida.

71. Yucatan is a peninsula of Mexico projecting northward into the waters of the Gulf of Mexico and the Caribbean sea.

72. Catoche is a cape, Yucatan peninsula, on the Yucatan channel.

73. West Indies, are an archipelago, southeast of the United States, consisting of three groups.

a. Bahama islands, form the northern group of the West Indies.

b. Greater Antilles, form the central group of the West Indies, including the largest islands of the archipelago.

c. Lesser Antilles, form the southeastern group of the West Indies, extending in a curve from the mouth of the Orinoco river to Porto Rico.

74. Mariato is a cape, southern Panama, on the Pacific.

75. Corrientes is a cape, western Mexico, on the Pacific coast.

76. Lower California is a western peninsula of Mexico projecting southward into the waters of the Pacific ocean and the Gulf of California.

77. San Lucas is a southern cape of the peninsula of Lower California, on the Pacific ocean.

78. Conception is a point, southwestern United States, on the Pacific ocean.

79. Mendocino is a cape, west-central United States, on the Pacific ocean.

80. Blanco is a cape, west-central United States, on the Pacific.

81. Flattery is a cape, northwestern United States, on the Pacific.

82. Vancouver is an island southwest of southern Canada, in the Pacific ocean.

83. Queen Charlotte is an island west of central Canada.

84. Baranof is an island off the western coast of southern Alaska.

Sitka, the former capital of Alaska, is situated on this island. How does the climate of Sitka differ from that of Cape Chidley? Reasons.

85. Aleutian is a line of volcanic islands extending southwest from the Alaskan peninsula, in the Pacific.

86. Pribilof is a group of islands west of Alaska in Bering sea.

Here thousands of fur seals every summer establish rookeries and nurseries for their young. Most of our seal skin garments are made from the skins of seals killed on or near these islands.

Relief.

87. Atlantic Plain is the slope and tide water region between the Atlantic ocean and the Atlantic highland.

88. Atlantic Highland is the great highland system which extends from the northern coast of Labrador nearly to the Gulf of Mexico. It consists of:

a. The **Lawrentian Plateau** in Labrador, is the oldest portion of North America. Its surface is less than half a mile high.

b. The **Appalachian System** is an easterly mountain system, extending parallel to the Atlantic and bordering on the Atlantic Plain, consisting of the Blue Ridge, the Allegheny, and Cumberland mountains.

89. The Great Central Lowland is the vast plain which lies between the Atlantic and the Pacific Highland. It extends from the Gulf of Mexico to the Arctic ocean, and is divided by the Height of Land into the Arctic plain and the Mississippi Valley.

90. The Pacific Highland, or Rocky Mountain System, includes almost all the western two-thirds of North America and is the primary highland of the continent. It extends from the Arctic ocean to the isthmus of Panama. Its general altitude is more than a mile, but many of its ranges rise one or two miles higher.

It reaches its greatest height and width nearly opposite Cape Mendocino.

91. The Pacific Plain is the narrow plain and slope bordering on the Pacific.

92. The Rocky Mountain System comprises:

a. The **Rocky Mountain Plateau** is the lofty table land traversed by a number of nearly parallel mountain ranges, the most important of which are:

b. The **Rocky Mountains** are the longest and highest range of the Rocky Mountain System.

c. The Sierra Madre (mother range) Mountains are a range in the southwest, forming with the Rocky Mountains the back-bone or continental divide.

What is a divide? Page 23, no. 56.

Sierra means 'saw.' How does it apply to the respective mountain ranges.

d. The Cascade Range (little water fall) is a western range, and together with

e. The Sierra Nevada (snowy range) located between the Rocky Mountains and the Coast Range, forms an almost continuous range of mountains between which Mt. Shasta forms the dividing line.

f. The Coast Range is a range composed of many ranges facing the Pacific in an almost unbroken wall.

93. Mohave is a desert north of the northern Californian peninsula. Its origin is attributed to the influence of the tropical calms.

See Climate. No. 162. e.

94. Mt. McKinley, about $3\frac{1}{2}$ miles high, in the northern Rocky Mountains, Alaska, is the highest peak of the continent.

95. Mt. Logan, in the northern Rocky Mountains, Canada, is the second highest peak.

96. Volcano Orizaba, in the Sierra Madre, Mexico, is the third highest peak.

97. Mt. St. Elias, in the northern Rocky Mountains, Alaska, is the fourth highest peak.

98. Volcano Popocatepetl, in the Sierra Madre, Mexico, is the fifth highest peak.

99. Mt. Mitchell, about $1\frac{1}{4}$ miles high, in the Appalachian Mountains, North Carolina, is the highest peak of the eastern highlands.

Named after Elisha Mitchell who lost his life while trying to reach its summit. His remains repose on the top of the mountain.

100. Mt. Washington, in the White Mountains of New Hampshire, is the second highest peak of the eastern highlands.

A railroad carries visitors to a hotel on the top of the mountains. Why?

101. Height of Land is a gradual rise of land which divides the Great Central Lowland into the Arctic plain and the Mississippi valley. Its average altitude is not more than half a mile above sea level.

102. The Great Basin is a triangular plateau, higher than the rang-

es of the Appalachian system, lying between the Wasatch and Sierra Nevada mountains, and between the Snake and Colorado river basins. It is a region of interior drainage. (Area 217,000 sq. miles.)

Death Valley, so called from the number of persons who have perished there from thirst, is within the the Great Basin, also Great Salt Lake.

Drainage Areas.

103. The Drainage Areas of North America are the five great slopes that cause its drainage to flow toward the ocean or its arms.

104. The Mackenzie is the chief river on the Arctic slope. It rises in Great Slave Lake, and after a northwesterly course of about a thousand miles, enters the Arctic ocean by numerous mouths at the island-studded Mackenzie Bay.

One of these islands studding Mackenzie bay is Geography island, Map of N. A.

Its head streams rise, one in the Rocky Mountains and one in the Athabasca river. It was explored by Alexander Mackenzie, 1789.

105. The Nelson-Saskatchewan is the principal river system of the Hudson Bay slope. It is a deep, swift-flowing river which has its source in the Rocky Mountains, Canada, and which flows in a general eastern direction into Hudson Bay.

Since swift-flowing what would you expect to find along its course? What are rapids and cascades? P. 34 no. 157.

106. The St. Lawrence River is the principal river of the Atlantic slope. It is the only large river that does not rise in the Western Highland. Although an outlet to the Great Lakes, its source is the St. Louis River, Minnesota. It flows in a general northeasterly direction, and terminates in a large estuary opening into the Gulf of St. Lawrence.

It includes the Great Lakes and all the tributary rivers, and thus forms the greatest water-highway in the world. Its total length from the source of the St. Louis to Anticosti island in the Gulf of St. Lawrence is 2,200 miles.

What is an estuary? P. 33, no. 147. Give reasons for the estuary of this river; mention ocean and lakes.

And the mighty Mississippi,
In his strong and powerful hands,
Down to meet the grand old ocean
In bold triumph bears the lands.

107. The Mississippi River, or the "Father of Waters", is the principal system draining the Gulf slope, and is the main stem of the greatest drainage system in the world. It rises in the basin

draining into Lake Itaska in northern Minnesota. Its first course is through swampy land, dotted with lakes; next it is bordered by high bluffs. From the Missouri to the Gulf of Mexico, the river winds through bottom lands, forming oxbow loops, oxbow islands and lagoons, and finally enters the Gulf through the delta by three great arms, or passes, and many bayous on which jetties have been constructed.

What are oxbow loops? Oxbow lakes? Page 33, no. 149. Lagoons? P. 19, no. 22. Bayous? P. 33, no. 148. Jetties or levees? P. 33, nos. 150 and 151.

Give reasons for the existence of the delta or flood plain at the mouth of the Mississippi.

The Mississippi-Missouri is the longest river in the world, 4,221 miles long.

108. The Rio Grande is the second important stream draining the Gulf Slope. It rises in the Pacific Highland, Colorado. After a general southeasterly course of about 1900 miles it enters the Gulf of Mexico.

Its upper course is obstructed by rocky ledges and cataracts. Why is its lower part obstructed by sandbanks and numerous wooded isles? What are cataracts? Page 34, no. 158.

109. The principal rivers draining the Pacific Slope are:

a. The Yukon River, the largest river on the Pacific Slope, rises as the Lewis in the Western Highlands, British Columbia, and after a general northwesterly course of 2,044 miles flows into Bering Sea, on the southern shore of Norton Sound, through a many-channelled delta from eighty to ninety miles wide.

Give reasons for this delta.

b. The Columbia, the second largest river on the Pacific slope, rises on the slope of the Rocky Mountains, British Columbia, has a very irregular, generally south-westerly course of 1400 miles, and enters the Pacific by an estuary twenty-five miles long and seven miles wide.

It was explored by Lewis Clark, 1805, and is noted for its extraordinarily abundant salmon fisheries.

Why an estuary and no delta although the stream carries much sediment?

c. The Colorado River is formed by the union of the Green and the Grand rivers which rise in the Rocky Mountains; it flows in a southwesterly direction, cutting its way through numerous canons among which is the wonderful Grand Canon, (p. 26, no. 82) and eventually empties into the Gulf of California. Its total length is 2000 miles.

The river and its Grand Canon were explored by the Spaniards under Coronado, 1540. Do you think the river has a delta? Why? Explain why the Columbia has an estuary while the Colorado and Yukon have a delta.

Lakes.

110. Great Lakes is the name given to the chain of lakes on the northern border of the United States. They include Lakes Superior, Michigan, Huron, Erie, and Ontario; Lake Michigan only lying wholly within the United States, and no one of the lakes lies wholly within the territory of the Dominion of Canada.

It is thought that they contain one-half of all the fresh water in the world. How do they affect the climate of the bordering regions? Page 42, no. 229 c.

111. Lake Superior is the uppermost of the great border lakes and the largest body of fresh water on the globe. The deposits of copper on the northern and the southern shores are very rich.

The walls of red sandstone on its southern coast, known as the "pictured rocks" stand opposite the greatest width of the lake.

112. Lake Erie is the most southern of the five Great Lakes. Owing to its shallowness, compared with the other Great Lakes, it is readily disturbed by the wind, and severe storms stir its waters to the bottom. For this reason and for the want of sufficient harbors and sea-room it is a very dangerous body of water for sailing vessels.

113. Lake Ontario is the lowest and smallest of the chain of the five Great Lakes. Its name is Indian, meaning "beautiful". It is much less disturbed by storms and its navigation much less obstructed by ice than Lake Erie. See map p. 70, as reference for all.

114. A water route via the Great Lakes (map page 70) may trace a steamship line beginning at Duluth, Minnesota, and hence—

a. On Lake Superior, including the ship canal through Keweenaw Point peninsula, to the St. Marys river;

b. ten miles around the rapids of the St. Marys river and down twenty feet by means of the Soo canal and its famous lock to Lake Huron;

c. on Lake Huron to the St. Clair river;

d. on the St. Clair river, St. Clair Lake, and St. Croix river to the chilly and stormy Lake Erie;

- e. on Lake Erie to the Niagara river;
- f. twenty-seven miles around the Niagara Falls and down three hundred feet by means of the Welland canal and its twenty-six locks to Lake Ontario;
- g. on Lake Ontario to the St. Lawrence river;
- h. on the St. Lawrence river to the Atlantic ocean;
- i. on the Atlantic south to New York;
- j. from New York on the Hudson river to the confluence of the Hudson river with the Erie canal, at Albany;
- k. from Albany 363 miles through the canal, across New York to Buffalo, on Lake Erie, and from thence back to Duluth, retracing the route followed before.

115. A lock is really a great box of water, ordinarily constructed of timber or masonry, long and wide enough for the largest boats that navigate the canal. Locks are the means by which a boat may be lowered from a higher to a lower level of water or lifted from a lower to a higher level.

Illustration. A steamer floating on Lake Superior is bound for Lake Huron, which lies twenty feet lower than Lake Superior; the vessel steams through the Soo canal; it soon enters a very large water box, or the greatest lock in the world; the lower gates are closed and the water in the lock is thus kept on a level with the water of Lake Superior; the upper gates, or the ones through which the boat entered are also closed to hold back the water of Lake Superior above; holes in the bottom of the lock are opened and the water gradually flows out; as it sinks, the boat is gradually lowered to the level of the St. Marys river below the rapids. The waters of St. Marys river for the remaining fifty miles of its course are on the same level as those of Lake Huron. In a similar manner a boat may be lifted to a higher level by causing the water to flow into the lock; thus the rising water in the lock will lift the boat to the level of a higher-lying surface of water.

There are locks on the canals about the rapids of the St. Lawrence river and in the Erie Canal.

Lakes Huron, Michigan, and Erie, are on the same level.

116. A straight line drawn from Chesapeake bay to Geography island in the Mackenzie bay would touch nearly all the more important lakes of North America.

Name these lakes in regular order. To what may the origin of all these lakes be traced? Page 35, no. 162.

117. Winnipeg is a large lake of south central Canada.

118. Athabasca is a large lake of central Canada.

119. Great Slave Lake is a lake in northern Canada.

120. Great Bear Lake is a lake in northern Canada.

121. Great Salt Lake, in the Great Basin (p. 76, no. 102) in Utah, is, with the exception of the Caspian sea, the largest salt water lake on the globe.

Its water is so salty that one can float on the waves in calm weather with no fear of being drowned.

Political North America.

122. The Political Divisions of North America are: Danish America; Dominion of Canada, Labrador, and Newfoundland; the United States including Alaska and Porto Rico; Mexico; the Central American States; the West Indies; and Bermuda islands.

123. Danish America consisting of Greenland and Iceland belongs to the kingdom of Denmark. These large islands are surrounded by the Atlantic and Arctic oceans and their arms and are governed by Danish officers.

124. The Dominion of Canada, Labrador, and Newfoundland, belong to Great Britain. Canada is bounded on the north by the Arctic ocean and Baffin bay; east, by the Atlantic; south, by the United States; west, by the Pacific ocean and Alaska. The executive power is in the hands of a Governor-General appointed by the ruler of Great Britain. Ottawa is the capital.

125. The United States is bounded on the north by Canada; east, by the Atlantic ocean; south, by the Gulf of Mexico and Mexico; west, by the Pacific ocean. It is a federal republic (p. 55, no. 25). Washington is the capital.

126. Alaska, included in the United States, is bounded on the north by the Arctic ocean; east, by Canada; south, by the Pacific ocean; west, by Bering sea and Bering strait. It is a territory of the United States and has a governor appointed by the President of the United States, and a delegate in Congress.

127. Porto Rico, included in the United States, is one of the West Indies.

128. Mexico is bounded on the north by the United States; east, by the Gulf of Mexico and Central America; west, by the Pacific ocean and Gulf of California. It is a federal republic patterned after that of the United States. Mexico is the capital.

129. The Central American States are bounded on the north by Mexico and the Gulf of Honduras; east, by the Caribbean sea; south and west, by the Pacific ocean. They are composed of six independent republics and the British colony of Honduras, or Belize.

130. The West Indies are surrounded by the Atlantic ocean, Gulf of Mexico, and the Caribbean sea. Cuba is a republic. Porto Rico is owned and controlled by the United States. Haiti is divided into two negro republics. The Bahamas and Jamaica belong to Great Britain. The Lesser Antilles belong to several powers. (Chiefly Great Britain, France, Netherlands, and Venezuela.)

131. Bermuda islands (page 73, no. 67.)

North America. *Continuation and Review.*

Mathematical.

132. What is the position and extent of North America?

133. What is its greatest length in miles? Its width?

134. What are its latitude boundaries? Its longitude boundaries?

135. What parallel crosses the central part of North America? What parts of other continents are crossed by the same parallel? What cities have this latitude?

136. What part of the land mass of the globe does North America include? What is its area?

137. What important small circles cross North America?

Physical.

Boundaries.

138. The natural boundaries of North America are:

On the north, the Arctic ocean and Baffin Bay;

on the east, the Atlantic ocean, Gulf of Mexico and Caribbean sea;

on the west, the Pacific ocean, Bering sea and Bering strait.

139. North America is connected with South America by the isthmus of Panama and separated from Asia by Bering strait.

140. Its shape is triangular, its widest part being toward the north.

Coast Forms of Land and Water.

141. Make an imaginary journey around North America beginning

at Bering sea by way of the Arctic ocean, future Panama canal, and Pacific ocean, naming in order the seas, gulfs, bays, sounds, and channels.

142. Make the same journey as in No. 141. Begin at the Alaskan peninsula and visit the peninsulas, capes, and islands.

143. Take an imaginary walk across the continent from Chesapeake bay to San Francisco bay and name in order the physical regions thus crossed.

Relief.

144. Describe the Rocky Mountain System.

145. Describe the Rocky Mountain Plateau.

146. Describe the five principal ranges of mountains that traverse the Rocky Mountain Plateau and compose the Western Highland System.

147. Locate the highest mountain peak, the second, the third, the fourth, and the fifth highest peaks of the Western Highland.

148. Describe the two highest peaks of the Eastern Highland.

149. Describe the Height of Land.

150. Describe the Great Basin. Death Valley.

Drainage Areas.

151. What is meant by the drainage areas of North America?

152. Imagine yourself stationed on Mt. McKinley and beginning north describe in order the five great drainage areas of the continent. Pages 77, 78, nos. 104—108.

Lakes.

153. What are the Great Lakes?

154. Describe Lake Superior. Lake Erie. Lake Ontario.

155. Trace a water route via the Great Lakes and the St. Lawrence to the Atlantic and from thence return by way of the Erie canal.

156. What is a lock?

157. Make an imaginary trip from Lake Superior to Lake Huron and describe the passage through the Soo canal and its lock.

See note after no. 115, p. 80.

158. Make a straight line trip in an air ship from Chesapeake bay to Geography island. Name and locate in order the lakes that you pass over.

159. Name and locate the lake in which one can bathe without fear of being drowned.

Climate.

160. Name the important primary circles that cross North America. In what zones is North America?

161. The position of North America in three zones give it every variety of climate.

162. The northern third of North America has a very cold climate.

Explain the effects of latitude in this instance. Page 42, no. 229 a.

The Arctic plain is exposed to the cold winds from the Arctic ocean, while most of it is cutoff by the coast mountain ranges from the equalizing influences of the Atlantic and Pacific oceans. Western Alaska has a milder climate than the rest of North America in the same latitude. Why? Page 84, no. 163 a.

163. The central belt, or temperate region, includes the United States, the basin of the St. Lawrence and Great Lakes and the northern part of Mexico. There are important differences of climate in this extensive region the more remarkable of which are:

a. The Pacific slope has a much milder climate than places in corresponding latitudes on the Atlantic coast. It is open to the effect of the anti-trade winds over the warm Japan current.

b. The Pacific slope has a copious rainfall. Why? P. 39, no. d.

c. The Great Basin and the central plateaus of the west are arid or barren regions. Why? P. 43, no. f.

d. The eastern half of the continent has an abundant rainfall, because the southern winds in cyclones bring vapor from the Gulf of Mexico, and the Atlantic ocean and deposit it as rain or snow.

e. The Great Mohave Desert may be attributed to the tropical calms.

The warm air, which rises at the equator and floats toward the poles (P. 40, No. 213) becomes cooled by the time it reaches 30 degrees latitude and descends. The descending air becomes warmer and hence its vapor is not condensed into rain.

164. The southern part of the continent has a hot climate. Why? (P. 42, no. 229 a.) It has an abundance of rain. Why? (P. 38, no. 202 a.) The plateau-like elevation of the land modifies the heat and lessens the rain of the interior. Why? (P. 42, no. 229 a, b, p. 43, f.)

Vegetation.

See Pp. 70—71.

165. The plants of North America are of many kinds, because the soil, relief of the land, and climate are so diversified.

166. a. The forests on the western slopes of the mountains from the Bay of San Francisco to Alaska are among the grandest and most valuable in the world.

What kind of climate here? Rainfall? Reasons for this forest growth.

b. Dense forests also extend along the eastern and western coast of Mexico, throughout Central America and the West Indies. Explain why they should flourish here.

c. Open forests of pine and fir stretching along the Height of Land (P. 76, no. 101), cover parts of the Eastern and of the Western Highlands. See map p. 71.

Why is the forest limit on the western side of the continent farther north than on the eastern side?

d. Why are the polar regions forestless? What is the principal vegetation here?

e. Cactus plants are the characteristic vegetation of the arid plains.

f. What other plant forms are included in the vegetation of the temperate parts of North America? See map p. 71. What plants are cultivated in the South? See map p. 71. What plants thrive in tropical North America? See plants of Torrid Zone p. 11, no. 42.

See map p. 71. and (a) locate the regions a lumberman would be interested in; (b) make a list of the cereals produced; (d) write the names of all the plants you have seen.

Animals.

167. What animals are found in the Arctic regions? P. 11, no. 41. Map p. 71.

The reindeer is sometimes called a caribou. Farther south are the animals hunted for their furs; such as, the otter, the beaver, and the mink.

168. In the Western Highlands are found the great grizzly bear (the fiercest animal of the continent), the big-horn sheep, the antelope, and the puma, or American panther.

169. In the forests are found bears, foxes, and other wild animals.

The bison is found only in small herds.

170. In the central portions of the continent the large native animals have been exterminated. Explain. Name the common do-

mestic animals of this region. Cattle originally introduced from Europe or Asia are found in vast herds on the Great Plains or eastern slopes of the Western Highland.

171. In the southern part are found birds of gay plumage, alligators, tapirs, jaguars, and monkeys.

There are about 700 kinds of birds in North America. The turkey and mocking bird are peculiar to the continent.

See map p. 71, and make a list: (a) of the animals a hunter would be interested in; (b) of the domestic animals; (c) of those you would fear; (d) of all the animals you have seen.

172. The lakes, rivers, and bordering ocean waters of North America abound in fish.

173. The salmon is found chiefly in the ocean and its tributary rivers, north of 40° north latitude.

In the early history of New England, the Merrimac is reported to have been so filled with salmon at certain seasons, that they sometimes crowded those near the banks out on dry land, but at the present they are not known to range farther south than the Kennebec river on the east and the Sacramento river on the west.

174. The cod is a fish of cold waters. In North America it ranges south as far as Cape Hatteras in the Atlantic ocean and the Columbia river in the Pacific ocean. The Newfoundland cod fisheries are the oldest in America (P. 73, no. 60.) Next to the herring the cod is the world's most important commercial fish, and in the United States it is the most important.

175. The common herring is a marine fish found as far south as North Carolina, but has a commercial importance only north of Cape Cod.

Large quantities of young herring are packed and sold as sardines.

The prosperity of Europe is as much dependent upon its herring industry as ours is upon the wheat crop.

176. Oysters grow chiefly in warm salt waters and are found native along the Atlantic coast from the Gulf of St. Lawrence to the Gulf of Mexico. Along the Pacific coast they are found native in the Gulf of California and in some of the inlets farther north.

Chesapeake bay is the largest natural bed, and Baltimore the greatest oyster market in the United States.

Over-fishing has caused an insufficient supply from the natural

beds, and has necessitated the planting of oyster farms in the salt water of the bays and river mouths on both the Atlantic and Pacific coasts.

The Americans eat more oysters than are eaten by any other nation.

The oyster must be four or five years old before it is fit to be eaten. Oysters are gathered in the fall and winter by means of long rakes, or dredges and shovels worked by machinery.

177. Sponges, a marine animal growth, are fished along the Atlantic coast. The most extensive sponge fisheries are along the Florida coast and in the waters washing the coasts of Central America and the West Indies.

Most of the sponges of commerce come from the eastern Mediterranean.

Minerals.

178. North America surpasses every other grand division in its mineral resources.

The Rocky Mountain district has most extensive deposits of gold, silver, lead, copper, and other metals.

The Appalachian Highland abounds in coal, iron, petroleum, natural gas, and other mineral products.

The Great Lake district is rich in iron and copper.

The Mississippi Valley has extensive beds of coal and other minerals.

Political.

179. America was discovered in 1492 by Christopher Columbus, a native of Genoa, Italy, in the service of Spain. The first land discovered was the island San Salvador, one of the small islands of the West Indies. The country was named by a German printer after Americus Vesputius, an Italian in the service of Portugal and the explorer of Brazil.

180. Make an imaginary visit to the political divisions of North America, stating how each is governed and naming the capital of each of the more important ones. P. 81, nos. 121, 131, 81, 122, 13.

181. The population of North America is over 106 million.

182: Four of the five races of mankind are represented in North America, and in order of population they are:

The Caucasians inhabit chiefly the central or mild temperate

belt and the highlands of the hot belt. They originally came here from Europe, 1492.

b. The Negroes inhabit the West Indies and the southern United States. They are the descendants of the slaves introduced into Spanish America and the United States.

c. The Indians are the native people of North America. They now inhabit the forests and western mountains of Canada and parts of the northern Pacific coast, but chiefly southern North America.

d. The Mongolians are found chiefly on the Pacific coast and in the larger cities of the continent. They came to North America through its western ports from their respective abodes, China or Japan.

e. The Esquimos are found in the Arctic regions of North America. They are believed to be akin to the American Indian. Both, Esquimos and Indians, are thought to be of Mongolian origin and to have come originally from Asia.

183. With what stage of culture do you associate each of the races found in North America? P. 53.

Commercial.

184. North America has excellent transportation facilities. The most important are:

a. Its central position between Europe and Asia and the two great oceans;

b. Its double sea front and numerous harbors which are located about midway between the shores of Europe on the east and of Asia on the west;

c. Its great inland water highways;

d. Its great trunk railways.

185. North America ranks next to Europe in the value of its commercial productions, which may be attributed to the following facts:

a. The continent lies mainly in the temperate zone;

b. It possesses a vast area of fertile soil and grazing lands;

c. It is rich in the most valuable metals and minerals;

d. It has extensive and rich fisheries;

e. It was discovered and settled by people from highly progressive

and cultured countries.

QUESTIONS FOR CLASS USE.

NORTH AMERICA.

What and Where?

Mathematical Geography of North America.

1. North America. 2. 5,000 miles. 3. 3,000 miles. 4. One-sixth. 5. 8° and 72° . 6. 55° and 167° . 7. 40° . 8. The Arctic circle. 9. The Tropic of Cancer.

Physical Geography of North America.

Bounding Waters. Winds.

10. Arctic ocean. 11. Atlantic ocean. 12. Pacific ocean. || 13. Labrador Current. || 14. Bering Strait Current. || 15. Japan Current. || 16. California Current. || 17. Gulf Stream. || 18. Trade winds. || 19. Calms of Cancer. || 20. Prevailing Westerly winds.

From Bering Sea to Bering Sea.

Seas, Gulfs, Bays, Sounds, and Straits.

21. Bering sea. 22. Norton sound. 23. Bering strait. 24. Banks strait. 25. Melville sound. 26. Baffin bay. 27. Davis strait. 28. Hudson strait. 29. Hudson bay. 30. Belle Isle strait. 31. St. Lawrence. 32. Fundy bay. 33. Chesapeake bay. 34. Florida strait. 35. Mexico. 36. Yucatan channel. 37. Caribbean sea. 38. Honduras. 39. Mosquito bay. 40. Panama. 41. Tehuantepec. 42. California. 43. San Francisco bay. 44. Juande Fuca strait. 45. Puget sound. 46. Bristol bay.

From Alaskan Peninsula to Alaskan Peninsula.

Peninsulas, Capes, and Islands.

47. Alaska. 48. St. Lawrence. 49. Prince of Wales. 50. Lisburne. 51. Barrow. 52. Arctic archipelago. 53. Greenland. 54. Farewell. 55. Iceland. 56. Labrador. 57. Chidley. 58. Newfoundland. 59. Race. 60. Newfoundland Banks. 61. C pe Breton. 62. Nova Scotia. 63. Sable. 64. Cod. 65. Long Island. 66. Hatteras. 67. The Bermudas. 68. Florida. 69. Sable. 70. Florida Keys. 71. Yucatan. 72. Catoche. 73. West Indies. a. Bahama. b. Greater Antilles. c. Lesser Antilles. 74. Mariato. 75. Corrientes. 76. Lower California. 77. San Lucas. 78. Conception. 79. Mendocino. 80. Blanco. 81. Flattery. 82. Vancouver. 83. Queen Charlotte. 84. Baranof. 85. Aleutian. 86. Pribilof.

Relief.

87. Atlantic Plain. 88. Atlantic Highland. a. The Lawrentian Plateau. b. The Appalachian System. 89. The Great Central Lowland. 90. The Pacific Highland. 91. The Pacific Plain. 92. The Rocky Mountain System. a. The Rocky Mountain Plateau. b. The Rocky Mountains. c. The Sierra Madre. d. The Cascade Range. e. The Sierra Nevada. f. The Coast Range. 93. Mohave Desert. 94. Mt. McKinley. 95. Mt. Logan. 96. Volcano Orizaba. 97. Mt. St. Elias. 98. Volcano Popocatepetl. 99. Mt. Mitchell. 100. Mt. Washington. 101. Height of Land. 102. The Great Basin.

Drainage Areas.

103. The Drainage Areas. 104. The Mackenzie. 105. The Nelson-Saskatchewan. 106. The St. Lawrence. 107. The Mississippi. 108. The Rio Grande. 109. Rivers of the Pacific Slope. a. Yukon. b. Columbia. c. Colorado.

Lakes.

110. Great Lakes. 111. Lake Superior. 112. Lake Erie. 113. Lake Ontario. 114. A water route via the Great Lakes. 115. A lock. 116. Line from Chesapeake bay etc. 117. Winnipeg. 118. Athabasca. 119. Great Slave Lake. 120. Great Bear Lake. 121. Great Salt Lake.

Political North America.

122. Political Divisions. 123. Danish America. 124. Dominion of Canada. 125. United States. 126. Alaska. 127. Porto Rico. 128. Mexico. 129. Central American States. 130. West Indies. 131. Bermuda islands.

North America. *Continuation and Review.*

Mathematical.

132. What is the position and extent of North America? What is its greatest length in miles? Its width? What are its latitude boundaries? Its longitude boundaries?

135. What parallel crosses the central part of North America? What parts of other continents are crossed by the same parallel? What cities have this latitude?

136. What part of the land mass of the globe does North America include? What is its area?

137. What important small circles cross North America?

138. What are the natural boundaries of North America?

139. How is North America connected with South America and separated from Asia?

140. What is the shape of North America?

141. Beginning at Bering sea, trace a water route around North America by way of the future Panama canal, naming in order the seas, gulfs, bays, sounds, and channels as reached.

142. Beginning at the Alaskan peninsula, trace a water route around North America and visit the peninsulas, capes, and islands.

143. Take an imaginary walk across the continent from Chesapeake bay to San Francisco bay, and name in order the physical regions thus crossed.

Relief.

144. Describe the Rocky Mountain System. The Rocky Mountain Plateau. Describe the five principal ranges of mountains that traverse the Rocky Mountain Plateau and compose the Western Highland System.

147. Locate the five highest peaks of the Rocky Mountain System. The two highest peaks of the Appalachian Mountains. The Height of Land. The Great Basin. Death Valley.

Drainage Areas.

157. What is meant by the drainage areas of North America? Describe in order the five great drainage areas of the continent.

Lakes.

153. What are the Great Lakes? Describe Lake Superior. Lake Erie. Lake Ontario. Trace a water route via the Great Lakes from, and back to Duluth.

156. What is a lock? Illustrate. Make an imaginary trip from Lake Superior to Lake Huron, describing the passage through the lock of the Soo canal. See p. 80, note after no. 115.

158. In a straight line trip from Chesapeake bay to Geography island, what lakes would you cross? Where is Great Salt Lake?

Climate.

160. What important primary circles cross North America? In what zones is it? Why has North America every variety of climate?

162. Discuss the climate in the northern third of the continent. The variation of climate in the central belt. The climate of the Pacific slope. The copious rainfall of the Pacific slope. The Great Basin and barren regions of the west. The barrenness of the Mohave desert. The abundant rainfall on the eastern half. The climate of the southern part of the continent.

Vegetation.

165. Discuss the variety of plants of North America. The forests on the western slopes of the Rocky Mountains. The dense forests of Mexico and Central America.

Open forests of pine fir. The forestless polar regions. The cactus plant. What other plant forms are included in the vegetation of the temperate parts of North America? (Map page 71.) What plants are cultivated in the South? (Map page 71.) What plants thrive in tropical North America? Locate the regions a lumber man would be interested in. Name the cereals produced? Write the names of all the plants you have seen.

Animals.

167. What animals are found in the Arctic regions? Farther south? In the Western Highlands? In the forests? In the central portions of the continent? In the southern part? Name the animals a hunter would be interested in. Some domestic animals. Some fierce animals. Write the names of all the animals you have seen.

Fish.

172. Where do fish abound? Discuss the salmon. The cod. The common herring. The oyster. The sponge.

Minerals.

178. What can be said of the mineral resources of North America? Of the minerals in the Rocky Mountain district? In the Appalachian Highland? In the Great Lake district? In the Mississippi valley?

Political.

- 179. By whom was America discovered? After whom named?
- 180. Discuss each of the political divisions of North America?
- 181. What is the population of North America?
- 182. Discuss each of the four races of mankind represented in North America.

Commercial.

184. Discuss the commercial facilities of North America. How does North America rank with the other continents in the value of its productions? To what conditions may this be attributed?

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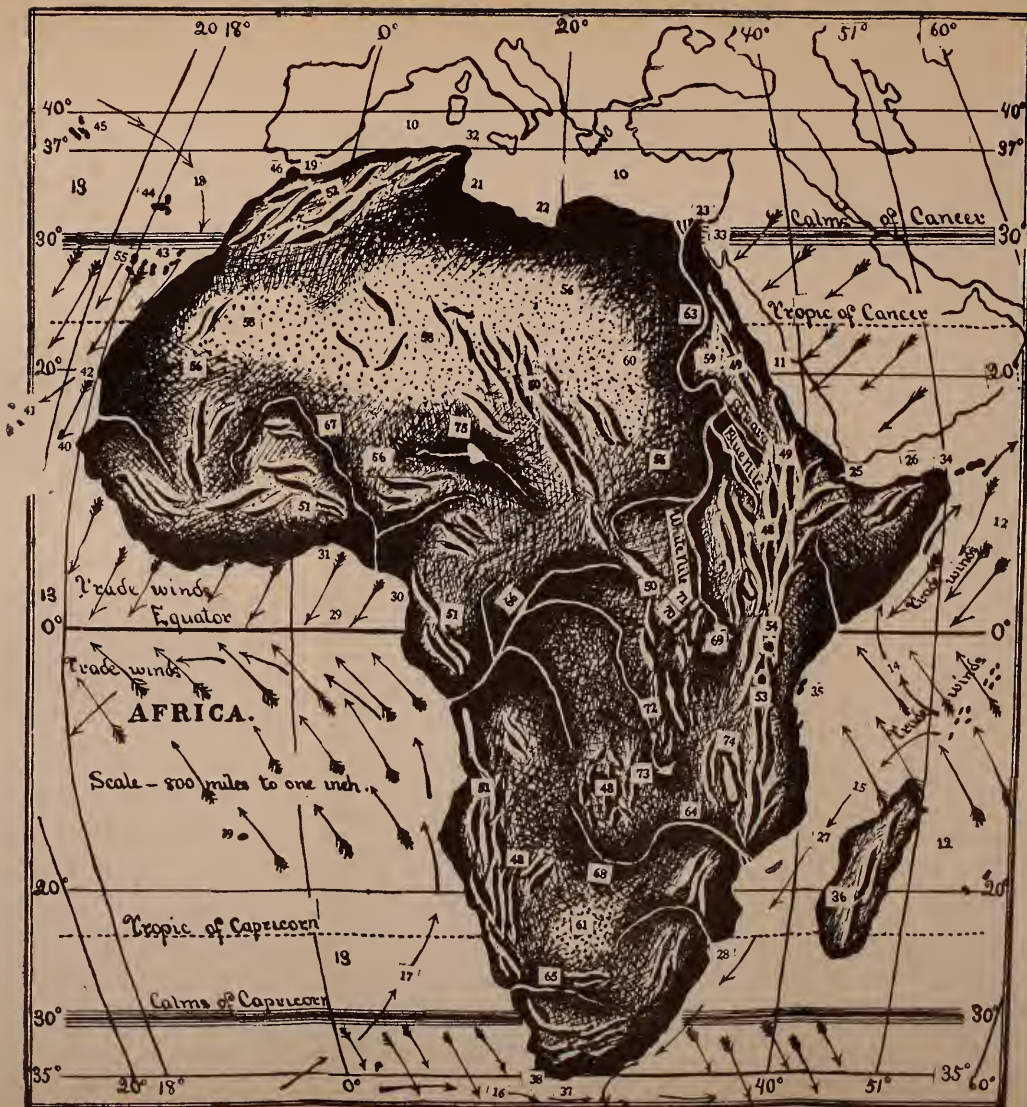
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THE UNITED STATES.

Our Native Land.

Stretching from the wild Atlantic to the broad Pacific's strand,
With her starry pennons floating, lies our own, our native land.

Freedom waves her banners brightly, holding here her sway supreme,
While enthroned in state beside her dwelleth Peace, calm and serene.

Here the mighty river rushes, here are prairie land and plain,
Here are mountain ranges lofty, here are fields of golden grain.

Here do noble cities flourish, here are harbors deep and wide,
Here are busy marts of commerce, here do art and science thrive.

Here does man meet man as brother with a hearty grasp of hand,
Here religious freedom triumphs in our own, our native land.

May God bless our own dear country, may He guide our Ship of State!
May His Mother e'er watch o'er it as its Queen Immaculate!

The study of the United States is Fourth Grade work, excepting the numbers marked with || which may be studied later. It is the chief part of the review work for Fifth B Grade, while the home city, county, and state, form the special topic of study for Fifth A Grade.

1. Position. The United States occupies the central and most valuable portion of North America. Excepting its distant possessions, it is wholly within the north temperate zone.

2. Latitude and longitude. The United States lies between the parallels of 25° N. and 49° N. latitude, and extends between the meridians of 67° W. and 167° W. longitude.

3. The northern latitude of the United States is the same as that of Paris, France.

4. The countries in about the same latitude as the United States are:

a. Europe:

Portugal, Spain, France, Switzerland, southern Germany, It

aly, Austria Hungary, Montenegro, Serbia, Turkey, Greece, Bulgaria, Roumania, and southern Russia.

b. Asia:

Turkey, northern Arabia, Persia, Bokhara, Afghanistan, Baluchistan, northern India, Chinese Empire, Korea, and Japan.

5. It is bounded on the

a. north, by the Dominion of Canada, St. Lawrence river, and Great Lakes, excepting Lake Michigan;

b. east, by the Atlantic ocean;

c. south, by the Gulf of Mexico, and Mexico;

d. west, by the Pacific ocean.

6. Its greatest extent in a direct line across the country is nearly three thousand miles and its greatest breadth from north to south is about seventeen hundred miles.

7. The area of the main body is about three million square miles. (3,090,777) Including the dependencies it is nearly four million square miles (3,805,000 square miles.)

The United States includes about one-third of the area of North America.

8. The United States is nearly equal in area to Europe, Canada, and Australia. Europe (3,753,310 square miles) and Canada (3,745,574 square miles) being somewhat larger, and Australia (2,947,200 square miles) slightly smaller.

Physical.

9. The Atlantic coast is irregular, indented by many bays and estuaries.

The Pacific coast is very regular with few indentations. P. 22, no. 45.

10. Gulfs, bays, sounds, and straits:

a. On the Atlantic:

1. Massachusetts bay, Massachusetts;

2. Narragansett bay, Rhode Island and Massachusetts;

3. Long Island Sound separating Long Island from New York and Connecticut;

4. The Narrows, a sound, separating Staten Island from Long Island;

5. New York bay, New York and New Jersey;
6. Delaware bay, Delaware and New Jersey;
7. Chesapeake bay, Maryland, second largest indentation on the United States coast;
8. Albermarle and Pamlico sounds, North Carolina;
9. Strait of Florida, page 72, no. 34;
10. Gulf of Mexico; page 72, no. 35;
11. Tampa bay, western Florida;
12. Mobile bay, Alabama;
13. Galveston bay, Texas.
- b. On the Pacific:
 1. San Francisco bay, California;
 2. Puget sound, Washington;
 3. Juan de Fuca, page 72, no. 44;
- c. On the Great Lakes:
 1. Straits of Mackinac, separate the upper peninsula of Michigan from the lower peninsula and connect Lakes Michigan and Huron;
 2. Green bay, is an arm of Lake Michigan indenting Wisconsin;
 3. Saginaw bay, is an arm of Lake Huron indenting the lower peninsula of Michigan.
11. Capes, peninsulas, and islands:
 - a. On, or in the Atlantic and Gulf of Mexico:
 1. Mt. Desert island, off the coast of Maine;
 2. Capes Ann and Cod, Massachusetts;
 3. Cape Cod peninsula, Massachusetts;
 4. Sandy Hook, New Jersey;
 5. Marthas Vineyard and Nantucket islands, off the coast of Massachusetts;
 6. Block island, off the coast of Rhode Island;
 7. Long Island, off the coast of New York and Connecticut;
 8. Manhattan island washed by the waters of the Hudson and East river;
 9. Staten island at the mouth of the Hudson river;
 10. Cape May, New Jersey;
 11. Cape Henlopen, Delaware;

12. Peninsula of Eastern Virginia;
13. Capes Charles and Henry, Virginia;
14. Bermuda islands, p. 73, no. 67;
15. Capes Hatteras, Lookout, and Fear, North Carolina;
16. Roanoke island, off the coast of North Carolina;
17. West Indies, p. 74, no. 73;
18. Cape Sable, Florida;
19. Florida peninsula, p. 74, no. 68;
20. Florida Keys, p. 74, no. 70;
21. Padre island, off the southeastern coast of Texas;

b. On the Pacific:

1. Santa Barbara islands, off the southwestern coast of California;
2. Point Conception and Cape Mendocino, California;
3. Cape Blanco, Oregon;
4. Cape Flattery, Washington.

c. On or in the Great Lakes and St. Lawrence river:

1. Royale Isle, upper Lake Superior, belonging to Michigan;
2. Apostle islands, Lake Superior, off the coast of Wisconsin;
3. Keweenaw point, Michigan, projecting into Lake Superior;
4. Thousand islands, St. Lawrence river, off the banks of New York.

Relief.

12. The physical regions, from east to west are:—

- a. The Atlantic plain is the slope and tide water region between the Appalachian Mountains and the Atlantic ocean.

It is narrow in the north but widens toward the south, where it is from one to two hundred miles wide. It is famed for its short, swift tidal rivers, good harbors, fertile land, large population, great commercial activities, and great wealth.

- b. The Atlantic Highland, or Appalachian Mountain System, bordering on the Atlantic plain extends from Maine to Alabama, and includes the Allegheny, Blue Ridge, and Cumberland ranges.

It is a great iron, coal, and oil region.

- c. The Mississippi Basin, or the southern part of the Great Central Lowland, lies between the Rocky Mountains on the west and the Appalachians on the east, and consists of the Lake slope, the

Central plains, and the Gulf slope.

It is noted for its long, large, and slow-flowing rivers, fertile plains, and large tracts of pasture lands, and is the great agricultural section of the country.

d. **The Pacific Highland, or Rocky Mountain System**, extends nearly north and south forming the great water-shed of the United States and occupying nearly half of its surface. It includes the Rocky Mountain plateau, Rocky Mountains, Great Basin, Cascade, Sierra Nevada, Coast Range, and the northern Sierra Madre.

It produces the greater part of our precious metals.

e. **The Pacific Slope** extends between the Pacific Highland and the Pacific ocean. It does not extend to the coast except about Puget sound. It includes the valleys of the Willamette and that of the San Joaquin and Sacramento rivers.

It is noted for the fertility of its valleys and its big trees. P. 35, no. b.

13. Name the three ranges of the Atlantic Highlands. These ranges in places are broken into groups:

1. **The White Mountains**, nearly always white with snow, are in Maine and New Hampshire and are noted for their beautiful scenery;

The White mountains form the northern end of the Appalachian system.

2. **The Green Mountains**, covered with green trees and moss, are in Vermont and are noted for their fine marble quarries;

3. **The Adirondack and Catskill Mountains** are in New York;

The latter are the scene of "Rip Van Winkle" by Washington Irving.

4. **The Blue Mountains** are in Pennsylvania;

5. **The Allegheny Mountains**, (endless mountains) in Pennsylvania, Maryland, and Virginia, are noted for their rich mines of coal and iron;

6. **The Blue Ridge Mountains** in Virginia, North and South Carolina, are noted for the famous Natural Bridge in Virginia;

7. **The Hoosac Mountains** in Massachusetts, are noted for a tunnel five miles long dug through the mountains;

8. **The Black Mountains** in North Carolina form the southern end of the Appalachian system. They are called Black mountains from the forests of balsam which cover their summits and give them a dark appearance.

14. Peaks of the Appalachian system are:

1. Mt. Mitchell, p. 76, no. 99;
 2. Mts. Washington, (p. 76, no. 100), Adams, Jefferson, and La Fayette are in the White mountains, New Hampshire;

3. The Old Man of the mountains is a stone profile of a human face eighty feet long, on the brow of a hill nearly one thousand feet high; *White Mts NH*

4. Mt. Marcy, in New York.

5. Mt. Whitney, in California, rises to an altitude of nearly two and three-fourths miles, and is the highest peak in the United States.

15. What are the principal mountain ranges of the Pacific Highland?
 The noted peaks of the system are:

1. Mt. McKinley, p. 76, no. 94;

2. Mt. Whitney, in California;

3. Mt. Rainier, in Washington;

4. Mt. Shasta, in California p. 76, nos. d. and e;

5. Pikes peak, in Colorado, was named after Major Pike who tried to reach its summit but failed;

6. Longs peak, in Colorado was explored under Colonel Long;

7. The Mount of Holy Cross, in Colorado, is nearly three miles high. On its western slope the snow lies in two crevices at right angles forming a glittering white cross fully one thousand feet long;

8. Fremonts peak in Wyoming, was explored by Colonel Fremont, the great explorer of the Rocky Mountains, who was the first to place on it the American flag.

Drainage.

16. The Atlantic Slope is well drained by short, rapid rivers that have their sources in the mountains.

The most important are:

1. The Kennebec, northeastern part of the United States, flows south into the Atlantic ocean;

2. The Merrimac, northeastern part of the United States, flows southeast into the Atlantic ocean;

This river is said to be the greatest mill river in the world.

3. The Connecticut, northeastern part of the United States, flows into Long Island sound;

4. The Hudson, northeastern part of the United States, flows south into New York bay;

5. The Delaware, northeastern part of the United States, flows southeast into Delaware bay;

6. The Susquehanna, eastern part of the United States flows into Chesapeake bay;

7. The Potomac, eastern part of the United States, flows southeast into Chesapeake bay;

8. The James, eastern part of the United States, flows southeast into Chesapeake bay;

9. The Roanoke, eastern part of the United States, flows southeast into Albemarle sound;

10. The Savannah, southern part of the United States, flows southeast into the Atlantic ocean;

What is a pass or gap? P. 26, no. 83.

17. The Gulf of Mexico Slope is drained chiefly by the Mississippi river system.

Describe the Mississippi river. P. 77, no. 107 also map of North America.

18. The principal branches of the Mississippi river are:

a. East side:

1. The Ohio, formed by the Allegheny and Monongahela rivers, flows southwesterly;

2. The Illinois, with its canal, connects the Mississippi with Lake Michigan.

b. West side:

1. The Missouri, rising in the Rocky Mountains, flows easterly;

2. The Arkansas, rising in the Rocky Mountains, flows southeasterly;

3. The Red river rises in the plateau plains in the southern part of the United States and flows southeasterly.

Less important rivers are: the Flint, Alabama, Tombigbee, Pearl, Sabine, Trinity, Colorado, and Nueces.

19. The Lake Slope has few and short rivers of little importance some of which are: the St. Louis, Menominee, Fox, and Genesee rivers.

The Red river of the north is the principal river and its waters reach Hudson bay.

20. The Pacific Slope is drained chiefly by—

1. The Columbia river, p. 78, no. 109 b;

2. The Colorado river, p. 78, no. 109 c;

3 and 4. The Sacramento and San Joaquin drain a fertile valley. The general course of the first is south; of the second, north. They both flow into the bay of San Francisco.

21. Great Basin, p. 76, no. 102.

In the state of Colorado are the sources of many rivers whose waters reach the Pacific ocean and the Gulf of Mexico. Name them. In what does the state of Colorado resemble Switzerland? What rivers rise in Switzerland?

22. The principal divides or water-sheds that give rise to these drainage areas, or basins are:

a. The Rocky Mountains;

What river basins does it divide?

b. The Appalachian Mountains;

What river basins does it divide?

c. The Height of Land;

What river basins does it divide?

23. The lakes of the United States are most numerous in the portion covered with glacial drift. P. 35, nos. 161 and 162.

The more important lakes are:

1. The Great Lakes, p. 79, no. 110;

2. Moosehead lake, Maine;

3. Lakes Champlain and George, New York;

4. Lake Okeechobee, Florida;

5. Lakes Itasca and Elk, Minnesota;

6. Great Salt Lake, p. 81, no. 121;

7. Lake Tahoe, on the boundary between Nevada and California,

24. The more important deserts are:

1. Great Mohave desert, California;

2. Great Salt desert, Utah;

3. Bad Lands, South Dakota;

4. Llano Estacado, Texas and New Mexico.

25. The Great Plains, p. 25, no. 71.

26. Rolling prairies and wooded lands occupy the Mississippi valley. The only mountains in this prairie are the Ozark mountains in Missouri.

27. Noted waterfalls:

1. Niagara falls, p. 35, no. a;
2. Yosemite falls, p. 35, no. b;
3. St. Anthony falls, in the Mississippi at Minneapolis, Minnesota;
4. Minnehaha falls (laughing water) in the Minnehaha river, between St. Paul and Minneapolis, Minnesota.

The name has become world-known through Longfellow's *Hiawatha*.

5. Shoshone falls, in the Snake river, Idaho.

28. Noted caves:

1. The cave of the Winds is a cavern under and back of the Niagara falls, which travelers can enter, and thus stand directly under the rocky ledge over which rush the falling waters;
2. Mammoth cave, Kentucky, the largest cave in the world, is one of the greatest natural curiosities of our country.

29. The Palisades are an immense unbroken wall of rock extending for fifteen miles along the western bank of the Hudson. They are from thirty to five hundred feet high. The top of the palisades is a long narrow table-land.

30. The Grand Canon, p. 26, no. 82.

31. Geysers and hot springs, pp. 36, 37, nos. 176 and 178.

32. The Yellowstone National Park, in the northwestern part of Wyoming, is a region about sixty-five miles long and fifty-five miles wide. It contains over one thousand geysers and hot springs. It is called the "Wonderland of America."

Climate.

33. The climate of the United States is varied because of the bordering oceans, high mountain ranges, prevailing westerly winds, neighboring ocean currents, and its great extent of latitude through 24° (49° — 25°).

1. The region bordering the Pacific ocean has a mild, genial climate because of the prevailing westerly winds from over the Japan current. There are but two seasons, the rainy season from November to May (winter), and the dry season from May to November (summer).

2. The Pacific Highland has, in general, a very dry climate, the winds parting with their moisture before reaching it;

3. The Mississippi Valley, in the southern part, has a semi-tropical climate with mild winters; the northern part has hot and sultry summers, and long, cold winters with heavy snows. This whole region except the Great Plains has abundant rains supplied by the moist winds from the Gulf of Mexico and the Great Lakes. Where are the Great Plains? P. 25, no. 71.

4. The Appalachian Highlands are naturally colder in the northern section than in the southern. They are, unlike the Pacific Highlands, well watered.

5. Along the Atlantic sea-board, or the Atlantic Plain, the prevailing winds are mainly toward the ocean, except at the extreme south, and the moderating influence of the sea on the climate is, therefore, not very great. The abundant rains of this section are supplied by the moist winds from the Atlantic ocean and the Gulf of Mexico.

34. 1. The western half of each of the Pacific States, excepting California, has a very heavy rainfall (60 to 70 inches): the prevailing westerly winds, laden with moisture, deposit a copious rainfall as they ascend the abrupt slope of the great Pacific Highland;

2. The states along the northern shore of the Gulf of Mexico, and the region at the southern end of the Appalachians have a very heavy rainfall (60 to 70 inches): the moist winds from over the Gulf of Mexico deposit their moisture abundantly in these two regions;

3. The dry section is in Arizona and New Mexico. Why? P. 43, no. f.

What amount of rainfall is necessary for the growth of crops? P. 39, nos. 203 and 204. What is the annual rainfall of your vicinity? Map p. 46.

35. In the eastern and northeastern parts of the country the weather is subject to great and sudden changes in temperature caused by cyclonic storms that cross the country from west to east every few days. What are cyclones? (Pp. 41 and 42, nos. 220 and 221). Most of these storms originate in the area occupied by the Dakotas, Montana, and Wyoming. The cold winds from the north and the warm winds from the south meet there and form a storm region which has been called the "weather-factory" of the United

States.

The Great Lakes are a storm center because the winds from the Pacific, Atlantic, and Gulf move toward that region.

United States Weather Bureau.

36. The United States Weather Bureau is able by carefully studying the movements of these storms and by giving timely warning of coming changes of weather to greatly aid agriculture and commerce. Explain.

How does the Weather Bureau give these warnings? What is a barometer? P. 37, no. 183.

Signal flags are used to inform the public as to what weather is to be expected.



Interpretation of Displays.

- No. 1, alone, indicates fair weather, stationary temperature.
- No. 2, alone, indicates rain or snow, stationary temperature.
- No. 3, alone, indicates local rain or snow, stationary temperature.
- No. 1, with No. 4 above it, indicates fair weather, warmer.
- No. 1, with No. 4 below it, indicates fair weather, colder.
- No. 2, with No. 4 above it, indicates rain or snow, warmer.
- No. 2, with No. 4 below it, indicates rain or snow, colder.
- No. 3, with No. 4 above it, indicates local rain or snow, warmer.
- No. 3, with No. 4 below it, indicates local rain or snow, colder.
- No. 5, denotes a sudden and decided fall in the temperature, and is generally displayed twenty-four hours in advance of a cold wave.

Industrial Sections and Groups.

37. On account of local differences in its industries and resources, the United States is divided into the following sections:

1. The New England, or manufacturing section.

One of the leading industries is the manufacture of cotton cloth.

2. The Middle Atlantic, or coal—, iron—, and petroleum—producing and commercial section.

3. The Southern states, or cotton-producing section.

They produce especially cotton, sugar-cane, corn, and rice.

4. The Central states, or agricultural and mining section.

It is the greatest wheat growing region of the world. It has valuable mines of coal, copper, and lead.

5. The Mountain and Plateau section, or grazing, and gold— and silver-producing section.

Copper and lead are also abundant. It is the most sparsely settled section.

6. The Pacific, or food-producing section.

It is noted for its great forests, cattle, and sheep ranches, orchards, and gold mines

33. Model for the Study of Each Separate State:

Maine.

1. Position. One of the New England states, and the most north-eastern state of the Union.

2. Boundaries. North, Province of Quebec, and St. Johns river; east, Province of New Brunswick, Grand lake, St. Croix river; south, Atlantic ocean; west, New Hampshire and Province of Quebec.

3. Bays. Passamaquoddy, Frenchmans, Penobscot, Casco.

4. Island. Mt. Desert.

5. Mountains. Kathadin, Abraham, Bigelow.

6. Lakes. Over six hundred. The most important are Moosehead, Rangely, Chesuncook.

7. Rivers. St. Croix, Penobscot, Kennebec, Androscoggin, Saco. These rivers form an immense water power for a variety of manufactures.

8. Industries. Manufacture of cotton goods, leather goods, and paper and wood pulp, ship-building, and fishing.

9. Cities. Augusta, in the southeastern part of the state on the Kennebec, is the capital and a manufacturing city.

Portland, in the southeastern part of the state on Casco bay, is the metropolis. It has a fine harbor and is the terminus of the Grand Trunk Railroad, and is used by the Canadians in the winter when their own ports are closed.

The States by Sections.

39. Capital, metropolis, and chief productions of each state—

Make use of the map while studying or singing the capitals.

United States, Washington, on the Potomac river.

New England States.

1. Maine, (Me.) Augusta, on the Kennebec river; Portland.
Lumber, ships.
2. New Hampshire, (N. H.) Concord, on the Merrimac river; Manchester.
Cotton, woolen goods.
3. Vermont, (Vt.) Montpelier, on the Winooski river; Burlington.
Granite, maple sugar.
4. Massachusetts, (Mass.) Boston, on the Boston Harbor; Boston.
Cotton goods, leather, fish.
5. Rhode Island, (R. I.) Providence, on the Providence bay; Providence.
Cotton, woolen goods.
6. Connecticut, (Conn.) Hartford, on the Connecticut river; New Haven.
Hardware, sewing machines.

Middle Atlantic States.

7. New York, (N. Y.) Albany, on the Hudson river; New York City.
Books, butter, clothing, salt.
8. New Jersey, (N. J.) Trenton, on the Delaware river; Newark.
Garden products, silk.
9. Pennsylvania, (Pa.) Harrisburg, on the Susquehanna; Philadelphia.
Iron, coal, iron manufactures.
10. Delaware, (Del.) Dover, on the Jones creek; Wilmington.
Vegetable, manufactures.
11. Maryland, (Md.) Annapolis, on the Chesapeake bay; Baltimore.
Grain, fruits, tobacco, oysters.
12. Virginia, (Va.) Richmond, on the the James river; Richmond.
Tobacco, coal, iron, marble, peanuts.

13. West Virginia, (W. Va.) Charleston, on the Kanawha river; Wheeling.

Coal, iron.

Southern States.

14. North Carolina, (N. C.) Raleigh, on the Neuse river; Wilmington.

Cotton, tobacco, turpentine, tar.

15. South Carolina, (S. C.) Columbia, on the Congaree river; Charleston.

Rice, cotton.

16. Georgia, (Ga.) Atlanta, on the Chattahooche river; Atlanta.

Manufactures, cotton.

17. Florida, (Fla.) Tallahassee, situated inland; Jacksonville.

Oranges, tropical fruits.

18. Alabama, (Ala.) Montgomery, on the Alabama river; Mobile.

Cotton, coal, corn, iron.

19. Mississippi, (Miss.) Jackson, on the Pearl river; Vicksburg.

Cotton, corn, lumber.

20. Tennessee, (Tenn.) Nashville on the Cumberland river; Memphis.

Corn, hemp, tobacco.

21. Louisiana, (La.) Baton Rouge, on the Mississippi river; New Orleans.

Sugar, cotton.

22. Arkansas, (Ark.) Little Rock, on the Arkansas river; Little Rock.

Coal, iron, lead, zinc.

23. Texas, (Tex.) Austin, on the Colorado river; San Antonio.

Cattle, cotton, sugar-caue.

24. Oklahoma, (Okla.) Guthrie, on the Cimarron; Oklahoma.

Corn, wheat, cotton, cattle.

East and West Central States.

25. Wisconsin, (Wis.) Madison, between Lakes Mendota and Monona; Milwaukee.

Grain, lumber, copper.

26. Michigan, (Mich.) Lansing, on the Grand river; Detroit.

Salt, lumber, copper, grain.

27. Illinois, (Ill.) Springfield, on the Sangamon river; Chicago.
Grain, horses, coal, lead, salt.
28. Ohio, (Ohio) Columbus, on the Scioto river; Cleveland.
Grain, wool, coal, iron.
29. Kentucky, (Ky.) Frankfort, on the Kentucky river; Louisville.
Tobacco, hemp, flax, horses.
30. Minnesota, (Minn.) St. Paul, on the Mississippi river; Minneapolis.
Grain, flour, lumber.
31. Iowa, (Iowa) Des Moines, on the Des Moines river; Des Moines.
Grain, live-stock, butter, flax.
32. Indiana, (Ind.) Indianapolis, on the White river; Indianapolis.
Grain, lumber, coal, iron.
33. Missouri, (Mo.) Jefferson City, on the Missouri river; St. Louis.
Corn, wheat, live stock
34. North Dakota, (N. Dak.) Bismark, on the Missouri river; Fargo.
Wheat, corn, live stock.
35. South Dakota, (S. Dak.) Pierre, on the Missouri river; Sioux Falls.
Wheat, corn, live stock, gold.
36. Nebraska, (Nebr.) Lincoln, on the Salt Creek; Omaha.
Grain, live stock.
37. Kansas, (Kans.) Topeka, on the Kansas river; Kansas City.
Wheat, corn, live stock, coal.

Mountain and Plateau States.

38. Montana, (Mont.) Helena, on the Missouri river; Butte.
Silver, gold, grain, live stock.
39. Wyoming, (Wyo.) Cheyenne, on the Crow Creek; Cheyenne.
Gold, coal, live stock.
40. Colorado, (Colo.) Denver, on the Cherry creek; Denver.
Silver, coal, iron, steel, cattle.
41. Idaho, (Ida.) Boise City, near Snake river; Boise.
Gold, silver, live stock.

42. Utah, (Utah) Salt Lake City, on Great Salt Lake; Salt Lake City.

Gold, silver, grain.

43. Nevada, (Nev.) Carson City, on the Carson river; Reno.

Silver, gold, cattle.

Pacific States.

44. Washington, (Wash.) Olympia, on the Puget Sound; Seattle.

Lumber, fish, grain, coal.

45. California, (Cal.) Sacramento, on the Sacramento river; San Francisco.

Gold, quicksilver, grapes, wheat.

46. Oregon, (Ore.) Salem, on the Willamette river; Portland.

Wheat, grain, gold, lumber, salmon.

Territories and Outlying Possessions.

* indicates Territories.

1. * Arizona, (Ariz.) Phoenix, on the Gila river; Tucson.

Silver, copper, gold, salt, cactus

2. * New Mexico, (N. Mex.) Santa Fe, on the Rio Grande del Norte; Albuquerque.

Cattle, gold, silver.

3. * Alaska, Juneau, in the southeast; Juneau.

Gold, seals, fish.

4. * Hawaii, Honolulu, on the island Oahu; Honolulu.

Sugar, rice, coffee, tropical fruits.

5. Philippines, Manila, on Luzon island; Manila.

Hemp, copra, sugar, tobacco, whale-bone, sulphur.

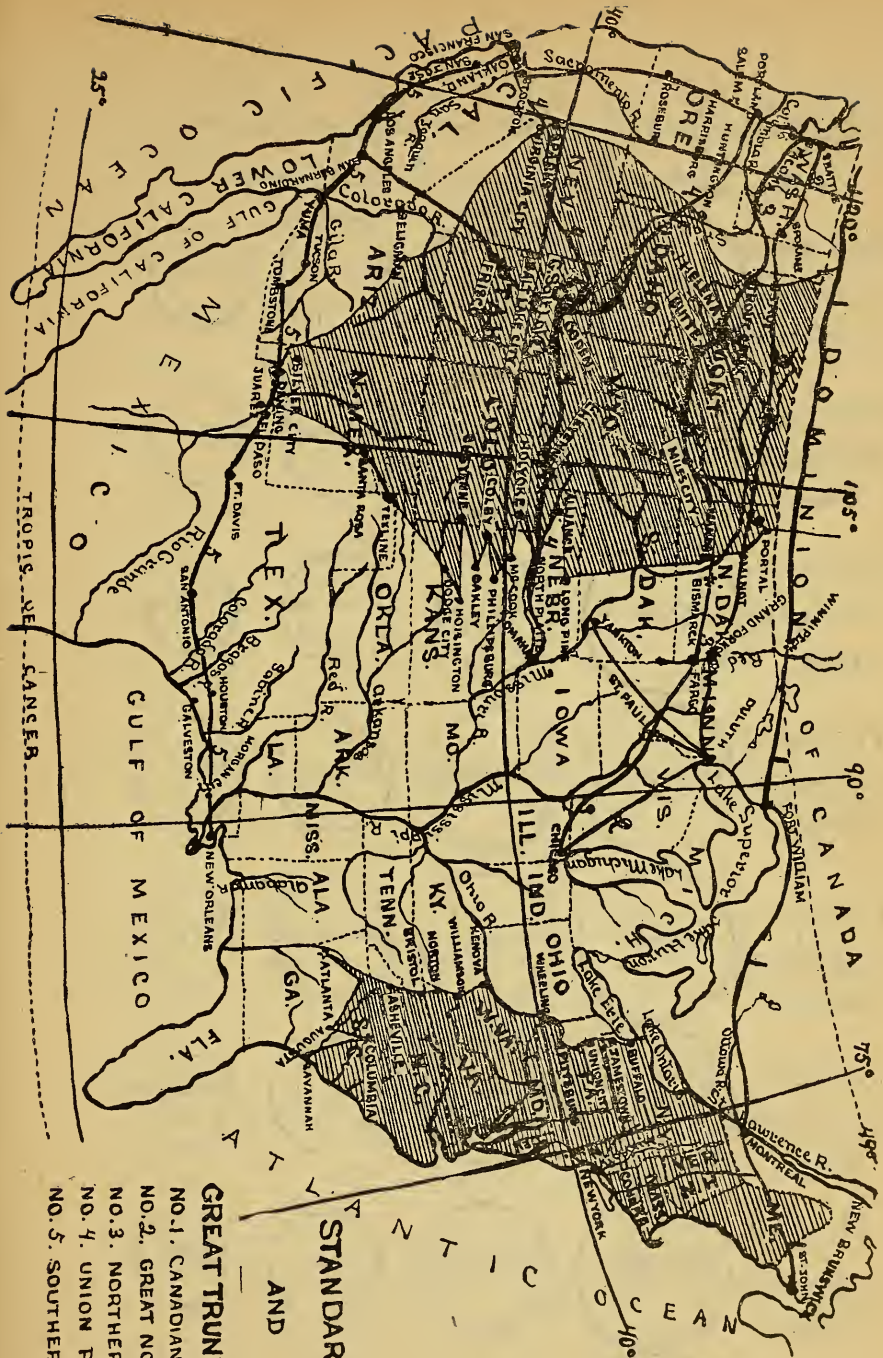
6. Porto Rico, San Juan, on its northern coast; San Juan.

Coffee, sugar, tobacco.

40. District of Columbia (D. C.) is located on the Maryland side of the Potomac river and contains about seventy square miles. Washington, the capital of the United States, is located in it.

Commit the following numbers to memory only with the aid of the map.

41. States on the Atlantic: 1. Maine, 2. New Hampshire, 3. Massachusetts, 4. Rhode Island, 5. Connecticut, 6. New York, 7. New Jersey, 8. Delaware, 9. Maryland, 10. Virginia, 11. North



STANDARD TIME
AND
GREAT TRUNK LINES,
NO. 1. CANADIAN PACIFIC.
NO. 2. GREAT NORTHERN.
NO. 3. NORTHERN PACIFIC.
NO. 4. UNION PACIFIC.
NO. 5. SOUTHERN PACIFIC.

Respective Rank of the States and Dependencies in the leading Productions of the Country

States having
the greatest
population.

New York

Pennsylvania

Illinois

Ohio

States having
the greatest
wealth.

New York

Pennsylvania

Illinois

Ohio

States having
the greatest
area.

Texas

California

Montana

N. Mexico

Principal
wheat-producing
states.

Minnesota

North Dakota

Kansas

Ohio

Principal
corn-producing
states.

Iowa

Illinois

Missouri

Texas

Principal
cotton-producing
states

Texas

Mississippi

Georgia

Alabama

Principal
hay-producing
states

New York

Pennsylvania

Iowa

California

Sugar

Cuba

Louisiana

Hawaiian
Islands

Philippine
Islands

Principal
milk-
producing
states

New York

Iowa

Pennsylvania

Illinois

Principal
cattle-
producing
states

Iowa

Texas

Kansas

Illinois

Principal
hog-
producing
states

Iowa

Missouri

Ohio

Illinois

Principal
horse-
producing
states.

Illinois

Iowa

New York

Ohio

Principal
sheep-
producing
states.

Ohio

Montana

Wyoming

Oregon

Principal
gold-
producing
states.

Colorado

California

Alaska
Dist.

S. Dakota

Principal
silver-
producing
states.

Colorado

Montana

Utah

Idaho

Principal
iron-
producing
states.

Michigan

Minnesota

Alabama

Virginia

Principal
coal-
producing
states.

Pennsylvania

Illinois

Ohio

W.
Virginia



Carolina, 12. South Carolina, 13. Georgia, 14. Florida.

42. States on the Gulf of Mexico:— 1. Florida, 2. Alabama, 3. Mississippi, 4. Louisiana, 5. Texas.

43. States on the Pacific coast:— 1. Washington, 2. Oregon, 3. California.

44. States on the Great Lakes:— 1. New York, on Lakes Erie and Ontario; 2. Pennsylvania, on Lake Erie; 3. Ohio, on Lake Erie; 4. Michigan, on Lakes Superior, Huron, and Michigan; 5. Indiana, on Lake Michigan; 6. Illinois, on Lake Michigan; 7. Wisconsin, on Lakes Michigan and Superior; 8. Minnesota, on Lake Superior.

45. States bordering on Canada: 1. Maine, 2. New Hampshire, 3. Vermont, 4. Pennsylvania, 5. Ohio, 6. Michigan, 7. Minnesota, 8. North Dakota, 9. Montana, 10. Idaho, 11. Washington.

46. The 45th parallel forms the boundary of 1. northern New Hampshire, 2. northern Vermont, 3. northern New York, 4. northern Wyoming, and 5. southern Montana.

47. States crossed by the 45th parallel north latitude: 1. Maine, 2. Michigan, 3. Wisconsin, 4. Minnesota, 5. South Dakota, 6. Montana, 7. Idaho, 8. Oregon.

A belt extending across the United States between 40° and 45° north latitude would mark the great grain producing region of the country.

48. Minnesota and Louisiana touch both sides of the Mississippi.

49. States on the east bank of the Mississippi river:— 1. Minnesota, 2. Wisconsin, 3. Illinois, 4. Kentucky, 5. Tennessee, 6. Mississippi, 7. Louisiana.

50. States on the west bank of the Mississippi river:— 1. Minnesota, 2. Iowa, 3. Missouri, 4. Arkansas, 5. Louisiana.

Sketch first from map and then from memory the Mississippi and its border-states.

51. Name the states on the north and south banks of the Ohio river.

52. Going directly west from New York city to the Pacific coast one would cross New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Iowa, Nebraska, Colorado, Utah, Nevada, California.

53. The six rivers crossed in a direct trip west from New York city would be the Hudson, the Delaware, the Susquehanna, the Ohio, the Mississippi, and the Sacramento.

Use many similar exercises until pupils are thoroughly familiar with the position

of each state.

Products.

Agricultural Products of the United States.

54. The United States lies entirely in the temperate zone. Each temperate zone may be divided into a warm belt lying next to the hot belt and a cool belt lying next to the cold belt or frigid zone. In our north temperate zone the warm belt lies between the tropic of cancer and a line crossing east and west about through the middle of the United States. (40th parallel.)

In the Old World this line runs east and west about along the main highlands of Europe and Asia.

55. The most important agricultural products of the United States are: 1. corn, 2. wheat, 3. cotton, 4. tobacco, 5. hay, 6. potatoes.

56. East of the 100th meridian are three natural divisions of agricultural products; the southern or cotton belt, the middle or corn belt, and the northern or wheat belt.

57. The cotton belt, or region foremost in the production of cotton, extends from the Gulf of Mexico to the mouth of the Ohio and from the Atlantic ocean on the east to the 100th meridian on the west.

The principal states included in the cotton belt are: 1. Texas, 2. Mississippi, 3. Georgia, 4. Alabama, 5. Louisiana, and 6, South Carolina. Chart p. 110.

58. The corn belt, or region foremost in the production of corn, reaches southward into the cotton belt and northward to central Wisconsin.

The principal states included in the corn belt are: 1. Iowa, 2. Illinois, 3. Missouri, 4. Texas, 5 Nebraska, etc. Chart p. 110.

59. The wheat belt or region foremost in the production of wheat covers the northern part of the corn belt and extends beyond it into Canada.

The principal states included in this belt are: 1. Minnesota, 2. North Dakota, 3. Kansas, 4. Ohio, 5. Indiana, etc. Chart p. 110.

The United States is second to Russia in the production of wheat.

60. If one were to travel directly south from the northern boundary of Minnesota to the Gulf of Mexico, name in order the states and

great crop belts he would cross.

61. The region producing an abundance of hay (chart p. 110) and oats includes the central part of the Central States.

62. Tobacco is abundantly produced in Kentucky, Virginia, Pennsylvania, and Ohio.

63. Sugar-cane (chart p. 110) is largely produced in Cuba, Porto Rico, Louisiana, Hawaii, Philippines, and all the Southern states; sugar-beets in California and Michigan; rice in South Carolina and the Southern states; oranges in California and Florida; grapes in California Missouri, and New York; peaches in New Jersey, Maryland, and Delaware; apples in Michigan, Connecticut, New York, and Oregon; peanuts in Virginia and Tennessee.

64. Timber is obtained chiefly from the eastern half of our country (p. 85, no. 166) also from the western slopes of the Sierra Nevada and Cascade ranges especially from the region about Puget Sound.

Lumbering, however, on a large scale is carried on chiefly in Michigan, Wisconsin, Washington, and Oregon.

Animals.

65. Horses are raised most extensively in the Central States; Illinois, Iowa, New York, Ohio, Pennsylvania, rank foremost.

66. Cattle and swine are raised in greatest numbers in the Central States.

Name the states ranking foremost in the production of corn and conclude what states rank foremost in the raising of cattle and hogs.

Vast herds of cattle and sheep are bred on the Great Plains (p. 25, no. 71) or in the states of the Plateau Section especially in 1. Texas, 2. New Mexico, 3. Wyoming, 4. Montana, and also in Iowa, Kansas, and Illinois. Chart p. 110.

67. Sheep are extensively bred in the states crossed by the Rocky Mountains, 1. Ohio, 2. Montana, 3. Wyoming, 4. Oregon, 5. New Mexico. Chart p. 110.

68. State where cattle raising is carried on most extensively. Where do you think cattle are raised for the sake of meat and

hides? Where largely for the sake of dairy products?

New York ranks first among the dairy states; but milk, butter and cheese are valuable in nearly all parts of the prairies, as well, as in the states farther east. Chart p. 110.

69. From what waters are cod fish obtained? Salmon? Herring? Sardines? Oysters? Sponges? Pp. 86, 87, nos. 173—177.

70. Alaska is in the center of seal fisheries. P. 75, no. 86. What fish are taken from the waters about Alaska? Washington ranks foremost as a fish-canning state and Maine second.

Halibut are taken from the waters off the New England and Alaskan coasts.

71. The Great Lakes produce trout, white fish, and yellow perch.

72. The rivers and lakes produce catfish, buffalo fish, mussels, bass, pickerel, etc.

Rank of the United States with other Leading Countries in Her Vegetable and Animal Productions.

|| 73. In the production of cotton the United States ranks foremost in the world, East Indies second, and Egypt third.

|| 74. In the production of corn the United States ranks foremost, Austria Hungary second, and Argentina third.

|| 75. In the production of wheat the Russian Empire ranks foremost, the United States second, India third, France fourth.

|| 76. In the production of oats the Russian Empire ranks foremost, the United States second, Germany third, and France fourth.

|| 77. In the production of barley the Russian Empire ranks foremost, the United States second, Germany third Austria Hungary fourth.

|| 78. In the production of rye the Russian Empire ranks first, Germany second, and the United States fifth.

|| 79. In the production of tobacco the United States ranks foremost in the world.

|| 80. In the production of lumber the United States ranks foremost, Germany second, Canada third, and Russia fourth.

|| 81. In the raising of cattle the United States ranks foremost, Russia second, Argentina third, Germany fourth.

|| 82. In the production of swine the United States ranks foremost, Germany second, Russia third, Austria Hungary fourth.

|| 83. In the raising of sheep the Russian Empire ranks foremost, Argentina second, the United States third, Australia fourth, New

Zealand fifth.

84. In the production of wool Australia ranks foremost, Russian Empire second, Argentina third.

85. The United States produces one-fifth of the fish catch of the world.

Minerals.

86. Mineral wealth is a source of power to any country: coal furnishes fuel, and iron machinery. Where is fuel used? Name different kinds of machinery.

Gold and silver give us millions of dollars every year to be used as money.

Gold, silver, iron, copper, mercury, tin, lead, etc. are used in the arts.

The arts are classified as:

a. The fine arts, or arts of beauty; such as painting, sculpture, music, poetry, etc.

b. The industrial, or useful arts, include the trades which require chiefly manual labor and skill. Name some trades.

c. The liberal arts embrace the higher branches of learning; such as, the languages, history, sciences, etc.

Principal Sources of our Leading Mineral Productions pp. 44—50.

87. Iron from Michigan, Minnesota, Alabama, Virginia, Pennsylvania.

88. Gold from Colorado, California, Alaska, South Dakota, Montana.

89. Silver from Colorado, Montana, Utah, Idaho, Arizona.

90. Copper from Montana, Michigan, Arizona, Utah, Missouri.

91. Nickel from Pennsylvania and New Jersey.

92. Zinc from Missouri, Kansas, Illinois, New Jersey.

93. Lead from Idaho, Colorado, Utah.

94. Mercury or quicksilver from California, Philippines.

95. Aluminum—Arkansas produces the clay from which this metal is made in large quantities.

This clay is found throughout the states.

96. Coal from Pennsylvania, Illinois, Ohio, West Virginia, Iowa.

97. Petroleum from California, Ohio, Texas, Pennsylvania, West Virginia, Indiana.

- 98. Gas from Pennsylvania, Indiana, West Virginia, Kansas.
- 99. Salt from New York, Michigan, Texas.
- 100. Granite from Vermont, Texas.
- 101. Slate from New York, Vermont.
- 102. Marble from Vermont, Georgia.
- 103. Limestone from Indiana.
- 104. Graphite p. 45, no. 253.
Jersey City manufactures more lead pencils than any other city in the world.
- 105. The whetstone quarries of Arkansas are the best in the world.

Rank of the United States with other Leading Countries in Her Mineral Productions.

106. In the production of iron and steel the United States ranks first, Germany second, Great Britain third, France fourth.

107. In the production of gold Australasia ranks foremost, the United States second, south Africa third, Russia fourth.

108. In the production of silver Mexico ranks foremost, the United States second, Australasia third, Bolivia fourth, Germany fifth.

109. In the production of copper the United States ranks foremost, Mexico second, Spain and Portugal third, Japan fourth, Chile ranks with Japan.

110. In the production of coal the United States ranks foremost, Great Britain second, Germany third, Austria-Hungary fourth, France fifth.

111. In the production of petroleum the United States ranks first, Russia second, Dutch East Indies third.

The best cement works are in eastern Pennsylvania and western New Jersey. Clay is used in making bricks, tiles, drain pipes, stone ware, terra cotta, pottery, etc. Trenton, New Jersey, is the seat of the most extensive pottery manufactories in the United States.

History.

112. Who discovered America? P. 87, no. 179.

John and Sebastian Cabot, Italians in the service of England, 1497—1498, following the path pointed out by Columbus, discovered the North American continent, and traced the coast of the present United States as far south as Virginia and North Carolina. By virtue of these voyages, England laid claim to the Atlantic coast and founded the first permanent settlement at James-

town, Virginia, 1607.

Spain explored the southern part of the United States, and founded the two oldest cities in the present United States proper, St. Augustine, Florida, 1565, and Santa Fe, New Mexico, 1582.

France, under Father Marquette and Joliet, and La Salle, discovered and explored the Mississippi, and claimed all the land drained by the river and its tributaries, 1673—1682.

The settlements along the Atlantic soon grew into thirteen flourishing colonies, all of which, with the exception of New York (by the Dutch) and Delaware (by the Swedes and Dutch) were founded by the English.

A war between the French and English colonies gave England the possession of that part of the present United States, lying east of the Mississippi, excepting New Orleans and Florida.

In 1776 the colonies declared their independence of the mother country. Great Britain claimed the right to tax the colonies, though they were not represented in the British Parliament. Attempts to force this claim brought on the Revolutionary War, 1775—1781, in which the Americans were successful.

Hence, the original United States territory, 1789, extended to the Mississippi river on the west, and as far south as Florida. Since then the country has been enlarged by the additions of Louisiana, Florida, Texas, Oregon Territory, Mexican Cession, Gadsden Accession, Alaska, Hawaii, Porto Rico, Wake, Guam, Tutuila, Philippines, the three islands St. Croix, St. Thomas, and St. Johns, and the Panama Canal Zone.

Religion.

113. There is no established religion in the United States. Freedom of religious belief and worship is secured to all.

114. Catholicity (p. 54, no. 16 c) was brought to America with its discoverers. Its early history in the United States is marked by the heroic zeal and arduous labors of the pioneer missionaries, who, braving dangers, hardships, and death, carried the gospel and civilization to the native Indian tribes.

Catholics were for a time oppressed and unjustly legislated against, but gradually the bigotry of old vanished; and from the soil, consecrated by the toils and blood of the early missionaries,

sprang a bountiful harvest, to which stately cathedrals, thousands of churches, numberless cloisters, over one thousand thriving parishes, and a Catholic population of fourteen million souls, bear striking evidence.

Education.

115. Liberal provision is made by each state for the education of the people. Common schools are maintained at the public expense, also high schools, academies, normal schools, and state universities.

Of the state universities, the most prominent and successful are those of Michigan, Minnesota, Wisconsin, and California.

116. Noted institutions of historic fame:

1. Harvard University, Cambridge, Massachusetts, founded 1636.
2. College of William and Mary, Williamsburg, Virginia, founded 1693.
3. Yale College, New Haven, Connecticut, founded 1741.
4. Princeton College, Princeton, New Jersey, founded 1746.
5. University of Pennsylvania, Philadelphia, founded 1751.
6. Brown University, Providence, Rhode Island, founded 1764.
7. Dartmouth University, Hanover, New Hampshire, founded 1770.

117. The educational work conducted under the direction and influence of the Roman Catholic Church in the United States, embraces all grades of institutions, from the kindergarten to the university.

The report of 1909 registered 1473 parishes with parochial schools, 213 colleges for boys, 708 academies and high schools for girls, and 7 universities.

In all these institutions the study of the Catholic religion forms an important part of the curriculum. The Catholic church considers religion the foundation of all education, and makes it one of her chief duties to mold the minds and the hearts of her youth, and to lead them by means of instruction to the exercise of every religious, moral, domestic, and civil virtue. Meanwhile she does not fail to equip them with the secular knowledge necessary and useful for life.

118. Noted Catholic universities:

1. Georgetown, District of Columbia, founded 1787, in charge of

the Jesuits;

2. Notre Dame, Indiana, founded 1842, in charge of the Fathers of the Holy Cross;

3. Creighton, Omaha, Nebraska, founded 1879, in charge of the Jesuits;

4. Catholic University of America, Washington, D. C., founded 1889.

This institution was established by the American bishops through the liberality of Miss Mary Caldwell, and is the highest seat of learning of the Catholic church in the United States. It is managed by officers under rules laid down by a board of trustees, composed of bishops, priests, and laymen. The president of the board is the Chancellor of the University, and this office is held by the Archbishop of Baltimore.

People.

119. The population of the United States, (census of 1900) including Alaska is over 76 million (76,303,387); adding the number of inhabitants peopling the dependencies, it is nearly 85 million (84,906,856).

120. The races of mankind under the control of the United States are:

1. The Caucasians, found throughout the country;

2. The Negroes, one-eighth of the population, live chiefly in the southern part.

3. The Indians, about two and one-half thousand in number, live chiefly in Oklahoma and on the reservations in the west.

4. The Chinese and Japanese, over one-hundred thousand in number, are employed as servants and day laborers, chiefly in the Pacific States.

5. The Malays, about seven million in number—over 6,000,000 Catholic—live chiefly in the Philippines.

Government.

121. The United States is a Federal Republic, (p. 55, no. 25), governed by rulers appointed by its own people. It consists of forty-six states and the four territories of New Mexico, Arizona, Alaska, and Hawaii; the District of Columbia, and a number of outlying possessions.

122. The Constitution is the supreme law of the land; it provides

for the administration of the government in three departments:

a. The legislative, or law-making department, is vested in Congress which consists of the House of Representatives and the Senate;

b. The executive, or law-enforcing department, is vested in the President and his Cabinet;

c. The judicial, or law-explaining department, is vested in the Judges of the Supreme Court and the Courts.

123. Each state has its own officers and a government similar in its parts to the national government. Each state is divided into counties and each county into townships. P. 56, no. 34—pp. 14, 15.

124. The territories are under the direct control of the national government. An organized territory has a governor, judges, and other officers appointed by the President of the United States, a legislature elected by its own people, and a delegate in the lower House of Congress who is entitled to speak but not to vote.

The Outlying Possessions.

125. The Indians are gathered on reservations under the direct control of the United States national government, represented by the Secretary of the Interior, who has charge of the Indian affairs.

126. 1. Alaska Territory, the extreme northwestern part of North America, was purchased 1867, from Russia, for \$7,200,000.

2. The Philippines, an archipelago of 1500 islands, are in the Pacific ocean southeast from China. They were obtained from Spain, 1898, by purchase and treaty, as a result of the Spanish-American War. Manila is the principal city; it is located on Luzon, the largest island of the group.

3. Hawaii, a group of islands in the Pacific, about 2,100 miles southwest of San Francisco, was annexed to the United States in 1898. Honolulu is the principal city.

4. Guam, the largest of the Ladrone islands, is situated east of the Philippines in the mid-Pacific, and is used by the United States as a coaling station and cable landing. It was obtained from Spain by treaty, 1898.

5. Tutuila, with two other small islands of the Samoan group, is situated east from Australia in the Pacific ocean. It is used as a coaling station, and was obtained by treaty agreement transacted with Germany and England.

6. Wake Island, an atoll in mid-ocean, between Guam and Tutuila, is used by the United States as a coaling station and cable landing, and was obtained from Spain by treaty, 1898.

7. The islands St. Thomas, St. Croix, and St. John, east of and near Porto Rico, were purchased from Denmark, 1902. St. Thomas is a coaling station.

8. The Panama Canal Zone is a strip of land, ten miles wide, across the Isthmus of Panama, obtained from the Republic of Panama by treaty.

Commerce.

127. The United States has excellent transportation facilities, the most important of which are: p. 88, no. 184 a—d.

128. The United States ranks foremost in the world in the production of salable articles, which fact may be attributed to the following:

1. It lies mainly in the temperate zone.
2. It possesses a vast area of fertile soil and grazing lands.
3. It is rich in the most valuable minerals and metals.
4. It has extensive and rich fisheries.
5. It was discovered and settled by people from highly progressive and cultured countries.

6. It has excellent educational advantages.

7. It has more money in its banks than any other nation.

1. What are the latitude boundaries of the United States?

2. Where are the great agricultural regions? The vast grazing lands? Thousands of cattle from the grazing regions of the Great Plains are taken north annually to be fattened in the corn belt.

3. Where are the two great mineral producing regions of the country? P. 104, no. 37 (2) and (5), pp. 96—97, no. 12 b and d.

4. In what part of the country is fishing an extensive industry?

5. By what nations was the United States settled?

6. What educational advantages has the country? What influence have these on the progress of the country?

7. The money in the banks belongs to the people. It is loaned to business men

and to city and state governments to carry on the business of the country. It is the possession of capital that makes London, New York, and other large cities great business centers.

129. The industries of the United States in order of importance are: 1. manufacturing, 2. agriculture, 3. stock-raising, 4. mining, 5. lumbering, 6. fishing.

130. In foreign trade Great Britain ranks first, Germany second, and the United States third, but in domestic trade we are far in advance of them.

131. Our largest foreign trade is with the British Isles, Germany, and France. Our important exports in this trade are: raw cotton, breadstuffs, tobacco, lumber, gold, silver, petroleum, iron and steel manufactures, agricultural implements, pork, meats, and leather.

One-half of our exports are sent from New York and one-half of all our exports go to Great Britain.

Although our own crop is so large, we import cotton because the upland cotton of the United States has a fiber only one and one-half inch long, and for delicate fabrics such as laces and fine muslins, the long fiber is necessary; and where great strength is required, as in the canvas webbing for bicycle tires, a long and coarse fiber, such as the Peruvian cotton supplies, is necessary.

We raise over one-third of the world's supply of tobacco. The flavor and value of tobacco depends upon the soil and climate in which it grows. The Cuban variety is favored for cigars; the Turkish, Egyptian and Louisiana tobacco, for smoking. The fine leaf of Connecticut is used for cigar wrappers. We export over two-thirds of our crop, but buy about half as much as we sell, chiefly from Cuba and Sumatra. Why do we buy tobacco?

132. Our most valuable imports are:

1. Sugar, chiefly from the East Indies, Germany, and Hawaii.
2. Cotton and woolen goods, chiefly from the British Isles, Germany, and Switzerland.
3. Coffee, chiefly from Brazil and the West Indies.
4. Tea, chiefly from China and Japan.
5. Hides and skins, chiefly from South America and Central America.
6. India rubber, chiefly from Brazil.
7. Tobacco, chiefly from Cuba and Sumatra.
8. Tin, chiefly from the East Indies and the British Isles.

9. Linen, chiefly from the British Isles, France, and Belgium.
10. Spices, chiefly from the East Indies.
11. Silk, raw, chiefly from Japan, China, Italy.
12. Silk, manufactured, chiefly from France, Germany, and Switzerland.

13. Chemicals, drugs, dyes, etc., chiefly from the West Indies, the East Indies, and Central America.

133. Our principal seaports and their population are:

1. New York, (3,437,202) N. Y., exports breadstuffs, provisions, manufactured articles, and petroleum, to England, Spain, Italy, Holland, and Germany.

Breadstuffs are grain, flour, and meal.

Provisions are mutton, beef, pork, butter, cheese, and milk.

2. New Orleans, (287,104) La., exports large quantities of sugar, rice, and cotton, to England and New York.

3. Boston, (560,892) Mass., exports principally manufactured shoes and leather goods, to England, Canada, and Cuba.

4. Galveston, (37,789) Tex., exports cotton, rice, and provisions, to England, France, Germany, Holland, and Belgium.

5. Philadelphia, (1,293,697) Pa., exports iron, steel, coal, and manufactured goods, to England and Belgium.

6. Baltimore, (508,957) Md., exports coal, breadstuffs, and manufactured goods to England and Germany.

7. San Francisco, (342,782) Cal., exports breadstuffs, provisions, and fruit to Hawaii, China, Japan, Alaska, and Canada.

Through these cities our foreign trade is carried on and they are designated by the government as "Ports of Entry". Such a port with the neighboring territory is known as a Customs District. It contains a custom house with a corps of officers who inspect all goods entering the port from foreign countries, and collect the duty as fixed by the tariff laws. P. 59, no. 29.

134. The principal lake ports are:

1. Chicago, (1,698,575) Ill., on Lake Michigan, is the largest railroad center in the United States. More grain is shipped from this port than from any other place in the world.

2. Cleveland, (381,768) Ohio, on Lake Erie, is a center for lake-ship building. Iron products are manufactured and shipped from this port. The iron is brought from Lake Superior.

3. Buffalo, (352,387) N. Y., is located at the junction of Lake Erie and the Erie canal. The Erie canal connects the Great

Lakes with the Hudson river, and brings the products of the great Northwest to the Atlantic sea-board. This makes Buffalo one of the largest lake ports from which grain, ore, lumber, and wheat are distributed to eastern markets.

4. Detroit, (285,704) Mich., on the Detroit river between lakes St. Clair and Erie, is a port from which grain, ores, and pork are distributed.

5. Milwaukee, (285,315) Wis., on Lake Michigan, exports wheat and flour.

6. Toledo, (131,822) Ohio, on Lake Erie receives large amounts of Lake Superior ore and is a distributing port for wheat and flour.

7. Duluth, (52,969) Minn., is one of the largest distributing ports for wheat of the United States, and is the eastern terminus of the Great Northern and the Northern Pacific railroads.

8. Superior, (31,091) Wis., on Lake Superior, is next to Minneapolis, the largest flour milling center in the country. It ships large amounts of wheat, iron ore, and lumber, and receives coal for re-shipment. Here are located the famous "whale-back" ship yards.

9. Ashland, (13,074) Wis., on Chequamegon bay of Lake Superior, is the shipping point for the Penokee iron district and has large ore docks.

135. Leading ports on the Mississippi are:

1 and 2. Minneapolis, (202,718) Minn., the largest city in Minnesota, and its twin city, St. Paul, (163,065) the capital and second city in size, are built side by side, the former on the right bank and the latter on the left bank of the river near the falls of St. Anthony and at the head of river navigation. Minnehaha falls is situated between the two cities. These cities form one commercial center. Minneapolis manufactures more flour than any other city in the world. St. Paul is the shipping and distributing point for the entire region.

The location and growth of St. Paul and Minneapolis may be ascribed: (a) To the lumber and flour milling facilities; (b) to the shipping advantages afforded by the head water of river navigation; (c) to the surrounding rich agricultural region.

3. La Crosse, (28,895) Wis., picturesquely situated on the left

bank of the river, at the junction of the La Crosse river with the Mississippi, has extensive lumber manufactures and is a distributing center for the surrounding portion of the state.

4. Dubuque, (56,297) Iowa, the second largest city of the state, on the right bank of the river, manufactures lumber, clothing, and vehicles and has important mining and commercial interests.

5-6 Davenport, (35,254) Iowa, and Rock Island, (19,493) Ill., are situated opposite each other, the former on the right, and the latter on the left bank of the river. Two large bridges span the river here.

Davenport is a grain market. It manufactures machinery and tobacco products and has meat-packing and sugar-refining establishments.

Rock Island is a railroad and manufacturing center. It has a government arsenal and large iron and steel works.

An arsenal is a place where the arms and munitions of war are kept, or a public establishment where such are made.

7. St. Louis, (575,238) Mo., on the right bank of the river, founded 1764, is the metropolis of the Mississippi valley, the second largest inland city and the fourth largest city in the United States. On account of its early recognition as a metropolis of the neighboring regions, combined with its splendid natural advantages, St. Louis has developed into the chief city on the "Father of Waters". Its favorable location south of where the Missouri river enters the Mississippi, affords an excellent depot where the valuable products of the "cool belt" are exchanged for those of the "warm belt". Here the freight of light-draught steamers of the upper river are exchanged for the freights of larger boats of the lower river and the Gulf. St. Louis also has connections by rail east and west, and by way of the Missouri, with a large region in the northwest rapidly developing.

What is meant by the "cool belt"? "Warm belt"? Name some products of each of these belts. P. 114, no. 54.

8. East St. Louis, (29,655) Ill., opposite St. Louis is noted as a railway center and as a place for the transfer of freight between eastern and western lines.

9. Memphis, (102,320) Tenn., on the left bank of the river, is

the metropolis of the state, the greatest inland cotton market, and the largest producer of hardwood lumber and cotton-seed products in the world.

Cotton-seed products are oil for table and industrial (oiling machinery, making soap, etc.) use; oilcake meal, or the refuse after the oil has been pressed out, which is used as a food for cattle and as a fertilizer; the hulls of the seed are sometimes used for making paper.

10—11. Vicksburg, (14,834) and Natchez, (12,210) Miss., on the left bank of the river, are important cotton markets and manufacturing centers of lumber and cotton-seed oil.

Vicksburg is the largest commercial city of Mississippi.

12. Baton Rouge, (11,269) La., on the left bank of the river, is the capital of the state.

13. New Orleans, (287,104) La., on the left bank of the river ranks second in the United States in its foreign commerce and first in the South in its population, commerce and manufactures. It is the greatest market in the world for cotton and one of the greatest for sugar and rice.

The growth and location of New Orleans are due to its location one hundred miles up the river, at the junction of ocean and river traffic, and to its convenient access to the great cotton growing section of the United States.

Transportation.

136. What is transportation? P. 56, no. 42.

137. What are the land routes of transportation? P. 57, no. 5.

138. What are the water routes of transportation? P. 58, nos. 19, 21, 22, 23.

139. Who owns the railroads in the United States? P. 57, no. 11.

140. The United States has an enormous amount of railroads, about 200,000 miles, or forty per cent of the whole railroad mileage of the world.

141. The principal railroads of the United States are:

1. New York Central and Hudson River—from New York, north through Albany, west through Utica, Syracuse, Rochester, to Buffalo.

2. Lake Shore and Michigan Southern—from Buffalo through Erie, Pa., Cleveland and Toledo, Ohio, to Chicago.

3. Chicago and Northwestern—from Chicago through Madison,

Wis., to Duluth, or to St. Paul, Minn., or from Chicago through Cedar Rapids, and Council Bluffs, Iowa, to Omaha (492 miles).

4. Union Pacific—from Omaha, through Cheyenne Wyo., Ogden, Utah, to Portland, Oregon (1828 miles); or from Ogden via Southern Pacific to San Francisco (1867 miles).

5. Southern Pacific—from San Francisco to Portland Ore., (772 miles); or southeast through Los Angeles, Cal., and Tucson, Ariz., to New Orleans, (2849 miles).

6. Northern Pacific—from Duluth, Minn., through Bismarck, N. Dak., and Helena, Mont., to Tacoma Wash., or Portland, Ore. [2462 miles].

7. Grand Trunk—from Portland, Me., through Montreal, Toronto, Canada, and Detroit, to Chicago [1142 miles].

142. Trains going east carry cattle and grain. Why? Those from Missouri and Kentucky carry hemp and tobacco. Those from Ohio and adjoining states carry pork, lard, and flour. Why? Some are coal trains, others are composed of refrigerator cars carrying fresh meat and fruits. Other cars support large iron tanks containing petroleum. From where are trains carrying petroleum generally bound? P. 117, no. 97. What do the railroads from the South transport to ports on the Gulf and Atlantic sea-board? With what are northward bound trains likely to be freighted? What do trains running westward carry? Are they as heavily laden as those going eastward? Why not?

143. Our rivers and lakes are navigated by steamboats, barges, canal boats and every sort of craft. What do they carry over the Mississippi? Over the Great Lakes? The Erie canal? The Soo canal?

144. Steamships carry goods from port to port and ocean liners cross the seas in every direction, carrying our goods to all the ports of the world, from which they return laden with foreign products. What goods of ours do they carry to other countries? From what ports, to what countries are they carried? P. 125, no. 133. What goods are brought back in return? P. 124, no. 123.

145. The rivers and lakes of our country are connected by more than forty canals.

146. The Erie canal was built by the people of New York, led by De Witt Clinton. It connects the Great Lakes with the At-

lantic by way of the Hudson river. This canal has made New York the greatest commercial city and the metropolis of America. Explain. What bodies of water does the Welland canal connect? P. 59, no. d. Why was it built? What have you learned regarding the Sault Ste. Maria canals? P. 59, no. e.

147. Other leading canals are:

1. The Michigan Ship and Drainage canal, connecting Lake Michigan with the Mississippi river by way of the Chicago and Illinois rivers;
2. Ohio canal, from Cleveland to Portsmouth, Ohio;
3. The Miami and Erie canal, from Cincinnati to Toledo, Ohio;
4. The Hudson and Champlain canal, from Troy to Whitehall, N. Y;
5. The Morris canal, from Easton, Pa., to Jersey City, N. J;
6. The Delaware and Rariton canal, across New Jersey.

Standard Time.

148. In order to secure uniform time over long areas, railroad companies of the United States have agreed to make a change of one hour in their time for every 15° of longitude, giving the same time to all places within each time belt. This is called Standard Time or Railroad Time. By this system the United States is divided into four sections, or time belts. Each belt is 15° wide; that is, each extends $7\frac{1}{2}^{\circ}$ east and $7\frac{1}{2}^{\circ}$ west of an adopted meridian. The time of the 75th meridian is called Eastern Time; that of the 90th meridian Central Time, that of the 105th meridian Mountain Time, and that of the 120th meridian Pacific Time. The local time of the Central meridian of each belt is made the standard time for the entire belt. See map p. 112.

The boundaries which represent the places where the railways actually change their time are somewhat irregular, since oftentimes the meridians extend through very unimportant points. Therefore, instead of following the exact boundaries, railways select well known places, like Buffalo, Pittsburg, and Atlanta, at which cities the change is made from Eastern to Western time.

There are 360° in longitude around the earth, and since the earth makes one rotation in twenty-four hours, a difference of (one twenty-fourth of 360°) 15°

longitude corresponds to one hour of time.

The main body of the United States is so broad from east to west that about four hours are required for rotation to carry it past the sun. Hence, this division into four standard time belts.

149. Name the principal places across the country from north to south at which the railroads change from Eastern to Central time. At which they change from Central to Mountain time. At which they change from Mountain to Pacific time. See map, p. 112.

If a train from the west reaches El Paso, Texas, at 11:50 Pacific time, and, after stopping ten minutes, proceeds eastward, at what o'clock in Central time does it leave?

(Pupils ought to ask and answer many similar questions.)

MISCELLANEOUS.

Cities.

150. Five leading cities on the Atlantic coast:

1. New York, [3,437,202] N. Y., is the largest and richest city in America, and is second only to London among the great cities of the world. It is situated on Manhattan island, Staten island, and other islands at the mouth of the Hudson river, and on the mainland north of these islands.

What does New York export? Where to? P. 125, no. 133. What part of our exports are sent from New York? P. 124. See note after no. 131

2. Philadelphia, [1,293,697] Pa., the third city of the United States in population, is situated on the Delaware river, one hundred miles from the mouth of Delaware bay at the junction of the Schuylkill and Delaware rivers. It is the greatest coal depot in the United States. Here is the Old State House where the Declaration of Independence was signed.

What does Philadelphia export? Where to? P. 125, no. 133.

3. Boston, [560,892] Mass., is located in northeastern Massachusetts and is distinguished for its places of historic interest.

What does Boston export? Where to? P. 125, no. 133.

4. Baltimore, (508,957) Md., is situated in the north central part of Maryland on the Chesapeake bay.

What does Baltimore export? Where to? P. 125, no. 133.

5. Washington, (278,718), the seat of government of the United

States, is situated in the District of Columbia, on the Potomac river.

151. Seven leading cities on the Pacific coast:

1. San Francisco (342,782) Cal. on San Francisco bay is the most important western port of the United States.

What does it export? Where to?

2. Los Angeles [102,479], southern Cal., is situated in a rich fruit-growing region.

3.—4. Tacoma [37,714] and Seattle [80,671], Wash., on Puget sound, are, next to San Francisco, our chief seaports on the Pacific coast. Seattle is the principal port for Alaskan trade and is a large lumber market.

What railroads terminate here? Map, p. 112.

5. Oakland (66,960), Cal., is situated across the bay from San Francisco. It is an important trade center and is noted for its many beautiful residences.

6. San Diego [17,700], Cal., has a fine harbor.

7. Portland [90,426], Ore., at the head of ocean navigation on the Willamette river, exports more lumber than any other port in the world.

152. Ten of the leading inland cities are:

1. Chicago [1,698,575], Ill., on Lake Michigan.

2. St. Louis [575,238], Mo., on the Mississippi river.

3. Cleveland [381,768], Ohio, on Lake Erie.

4. Buffalo [379,584], N. Y., on Lake Erie.

5. Cincinnati [325,902], Ohio, on the Ohio river.

6. Pittsburg [321,616], Pa., at the junction of the Allegheny and Monongahela rivers.

7. Detroit [285,704], Mich., on the Detroit river.

8. Milwaukee [285,315], Wis., on Lake Michigan.

9. Louisville [204,731], Ky., on the Ohio river.

10. Minneapolis [202,718], Minn., on the Mississippi river.

153. Ten of the largest cities of the United States in order of population are:

1. New York, (4,013,781) in southeastern New York [including suburbs].

2. Chicago (1,698,575) in northeastern Illinois.
3. Philadelphia (1,293,697) in southeastern Pennsylvania.
4. St. Louis (575,238) in eastern Missouri.
5. Boston (560,895) in eastern Massachusetts.
6. Baltimore (508,957) in north central Maryland.
7. Cleveland (381,768) in northeastern Ohio.
8. Buffalo (376,584) in western New York.
9. San Francisco (342,782) in western California.
10. Cincinnati (325,902) in southwestern Ohio.

154. Why should a large city have grown up at New York? Because it is favorably located for commercial and manufacturing purposes.

a. New York has convenient entrance to the trade of the Great Lakes and the Mississippi Valley by way of the Mohawk river valley through which the Erie canal and railroads have been constructed.

b. New York has many great banks and trust companies which have in them hundreds and millions of dollars, with which to carry on commerce and great enterprises.

See note, p. 123, no. 7.

155. Why should a large city have grown up at Philadelphia? Philadelphia, because of its location one hundred miles up the Delaware river at the head of deep-water navigation, is favorable for trade with a prosperous section of the country. Its ready access to the mines of coal and iron on one side, and the ocean on the other, has made it a great manufacturing and commercial city, and the foremost ship-building city in the Union.

156. Why should a large city have grown up at Boston? Its location on a fine harbor and in the heart of the most densely populated manufacturing section of the United States has made it a commercial center, by way of which the manufactured products of England are sent to other parts of the United States and to foreign countries.

157. Some cities, not located on salt water, still having a very extensive commerce are:

1. Chicago, Ill., p. 125, no. 134.
2. Philadelphia, Pa., p. 133, no. 152.

3. New Orleans, La., p. 128, no. 135;

4. Portland, Ore., p. 132, no. 151;

158. What cities of the world have about the same latitude of your home city or village?

159. The chief export points of the cotton belt are:

1. New Orleans, La., p. 128, no. 135.

2. Galveston, Tex., p. 125, no. 133;

3. Memphis, Tenn., p. 127 no. 135;

4. Savannah, Ga.

5. Charleston, S. C.

160. The leading cities of the United States that are in the same latitude as Lisbon in Portugal are:

1. Wilmington, northeastern Delaware;

2. Baltimore, central Maryland, on Chesapeake bay;

3. Cincinnati, southeastern Ohio, on the Ohio river;

4. Indianapolis, central Indiana;

5. Springfield, central Illinois;

6. Leavenworth, northeastern Kansas, on the Missouri river;

7. Denver, northeastern Colorado.

161. Pittsburg, Pa., is situated at the junction of the Allegheny and Monongahela rivers, which here unite to form the Ohio river. This is the leading iron-manufacturing city in the world. It also leads the world in the manufacture of plate-glass.

162. Most of the pins used in the United States are manufactured at Waterbury and Birmingham, Connecticut.

163. Brattleboro, Vt., manufactures organs.

164. Gloucester, Mass., is the chief fishing port in the United States.

165. Waterbury, Conn., and Elgin, Ill., manufacture clocks and watches.

166. The rivers of the Atlantic coast, useful on account of their manufactures are the Merrimac, Connecticut, Penobscot and Delaware.

Those useful on account of their commerce are: the Hudson and Susquehanna.

167. California has a greater variety of climate than any other state, which may be ascribed to its great extent of latitude, its enormous coastline, its "leaning out" upon the Pacific, its con-

tact on the east with the Great Mohave desert, its exposure on the south and west to the influence of the Pacific, and its great mountain ranges; etc.

168. A part of the drainage of Minnesota reaches:

a. The Arctic ocean by way of the Red river of the North, Lake Winnipeg, the Nelson river, and Hudson bay;

b. The Atlantic ocean by way of the Great Lakes and the St. Lawrence river;

c. The Gulf of Mexico by way of the Mississippi river.

169. Our flag has forty-six stars, each star representing one of the forty-six states of the Union.

170. If a line were drawn so as to separate the drainage waters of the St. Lawrence system from others, through what states would the line pass?

It would pass through Minnesota, Wisconsin, Illinois, Indiana, Ohio, Pennsylvania, New York, and Vermont.

171. Which of the states of the Atlantic slope send a part of their drainage waters into the Mississippi river? What states west of the Mississippi river send only a part of their drainage into it?

The states on the Atlantic slope that send a part of their drainage into the Mississippi are: New York, Pennsylvania, West Virginia. The states west of the Mississippi that send only a part of their drainage into it are: Montana, Wyoming, Colorado, New Mexico, Minnesota, North Dakota, South Dakota, Texas, Louisiana.

172. The states farther north than Wisconsin are: Minnesota, North Dakota, Montana, Idaho, Washington, Michigan, and Maine.

173. Michigan has the greatest extent of lake shore and Florida the greatest extent of sea shore.

174. The Sorrel, or Richelieu river, is the outlet of Lake Champlain; it flows into the St. Lawrence river.

175. The United States is surpassed in extent only by the Empires of Great Britain, China, and Russia.

176. Eastport, Maine, is the most eastern city of the United States.

177. Rhode Island is the smallest state in the Union; Texas is the largest.

178. The cities of the world on or near the 40th parallel north lati-

tude are; Denver, Philadelphia, Lisbon, Madrid, Rome and Peking.

179. The states ranking foremost in the manufacture of iron are: Pennsylvania, Ohio, Illinois, New York, and New Jersey.

180. The states ranking foremost in the manufacture of textiles (woven fabrics) are: Massachusetts, Pennsylvania, New York, Rhode Island, and New Jersey.

See charts pp. 110, no. 111.

181. Timber, tar, pitch, rosin, and turpentine are known in commerce as naval stores.

The pine belt, famed for its naval stores, extends all along our Atlantic coast from North Carolina to Florida and farther inland from the Atlantic coast to Louisiana.

Savanna, Ga., is the chief turpentine and rosin shipping port in the world.

Search Questions.

1. Name ten of the United States that have seaports and mention the chief seaport of each.

2. Name ten articles of commercial importance going east through the Sault Ste. Maria Canal.

3. Trace wheat from a Minnesota farm to a foreign consumer's table.

4. Bound the Mississippi Valley.

5. Name five of the most important lumber states of our country.

6. Write the five following states in order of size: Minnesota, Texas, California, Pennsylvania, and Illinois.

7. The British Isles and Labrador are in the same latitude. Explain the difference in climate.

8. Discuss somewhat in detail the domestic commerce of the United States, naming three of the articles most prominent in domestic commerce, and the routes by which commerce in these articles is mostly carried on.

GEOGRAPHICAL TOAST.

At any of our large hotels, we may sit down to dinner before a mahogany table, made from trees grown in the West Indies. Our table-cloth may be woyen from Irish flax, and our knives and forks are of steel made of iron, dragged from the mines of Lake Superior. We drink coffee which has been imported from the East Indies or Brazil; the sugar we put into it came from the cane-fields of Cuba, or the beet-fields of Germany. We have a splendid cut of roast, which a few months ago was a part of an animal, galloping madly over some western prairie with a cowboy behind him. Some of this same beef is being consumed at the tables in Germany, or the British Isles, our fresh meats being shipped to these countries in refrigerators. We sprinkle our meat with salt from the salt wells of Michigan or New York, and season it with pepper which grew on the island of Singapore, on the other side of the world. Our bread is made of wheat which was ground into flour at Minneapolis. The mince pie which is brought in for dessert, is filled with currants from Greece, while the three-cornered nuts with which we finish our meal, were shaken from trees in the forests of Brazil.

OUTLYING TERRITORIES AND COLONIAL POSSESSIONS OF THE UNITED STATES.

ALASKA.

North, far north, we find Alaska, with its mines and forest lands,
Where the stately Mt. McKinley rears its lofty head and grand.
Here we see the Yukon flowing, from all falls and rapids free,
Thro' its many-channeled delta on its journey to the sea,

1. Position: Alaska is situated in the extreme northwestern part of North America.

2. Bays, seas and sounds:

1. Bering sea, p. 69, no. 21;
2. Bering strait, p. 69, no. 23;
3. Norton sound, p. 69, no. 22;
4. Bristol bay, p. 72, no. 46;

3. Islands:

1. The Aleutian islands, p. 75, no. 85;

2. Kadiak island, off the southern coast;
3. Pribilof island, p. 75, no. 86;
4. Baranof island, p. 74, no. 84;

4. Capes and peninsulas:

1. Cape Prince of Wales, p. 73, no. 49;
2. Cape Lisburne, p. 73, no. 50;
3. Point Barrow, p. 73, no. 51;
4. Alaskan peninsula, p. 72, no. 47;

5. Mountains: The Alaskan mountains form the principal highland. Mts. McKinley and Elias are the highest peaks. P. 76, nos. 94, 97.

6. Rivers: The Yukon, p. 78, no. 109.

7. What would you say of the climate of Alaska?

8. Important products: Seal furs, fish, gold, whale-bone, sulphur. What are the leading industries?

9. People: The population is very sparse. Most of the people are Indians and Eskimos, though there are a number of white traders, fishermen and gold miners.

10. Government: Alaska is a territory of the United States. P. 122, no. 124.

HAWAIIAN ISLANDS.

11. Position: The Hawaiian islands, formerly known as the Sandwich islands consist of eight large islands and a few rocky islets. The largest of the group is Hawaii and the most important Oahu. They are located in the Pacific ocean about 2,100 miles south-west of San Francisco in about the same latitude as Cuba. P. 19, no. 16.

The island of Molokai is set apart for lepers.

12. Mountains: Mts. Loa and Kilanea are volcanoes.

13. Climate: It is warm the year round.

14. Products: Sugar, rice, coffee, tropical fruits, and meats.

The raising of sugar-cane and of sheep are the principal industries. The brown sugar is exported to the United States.

15. Area: About 6,740 square miles.

16. People: It has 154,000 inhabitants, consisting of the natives, Chinese, Japanese, Portuguese, and Americans.

The Hawaiians belong to the Malay race. They resemble the natives of the other Pacific islands, and have made rapid progress in civilization, having excel-

lent schools.

17. **City:** Honolulu, on Oahu island, is the capital and metropolis. It has fine buildings and a large American and English population.

18. **Government:** It is a territory of the United States. P. 122, no. 124.

PHILIPPINE ISLANDS.

This vast labyrinth of islands in Pacific's waters calm,
For the splendor of its landscapes unto none doth yield the palm,
With its shores all deep indented by fair bays and inlets too,
Crests and cones all wrapped in vapor, island-studded lakes of blue.

19. **Position:** This archipelago, a group of the East Indies, consists of about 1,500 islands; It is situated about six hundred miles southeast of continental Asia.

The principal islands are: Luzon, Mindanao, and Mindora.

20. **Climate:** It has a tropical climate, always warm and sometimes very hot. There are two seasons, the dry or summer season, and the wet or winter season.

In what zone are these islands?

21. **People:** The natives are of the Malay and Negro races. The foreign population consists chiefly of Spaniards and Chinese.

The population is about seven million, (6,961,339) nearly all of whom are Roman Catholics.

22. **Products:** Manila hemp, a fiber of the banana tree, is one of the principal products. Tobacco, sugar, spices, and all tropical fruits are plentiful. Minerals of all kinds are found.

23. **Chief Industries:** Agriculture and the manufacturing of hemp and cigars are the principal industries. The water-buffalo is the beast of burden.

24. **Government:** It is a dependency of the United States.

25. **Cities:** Manila on Luzon island, is the capital and a seaport. Iloilo, on Panay, and Cebu, are also important ports.

Manila hemp is the principal export of these islands and is sent chiefly to the United States.

Trace a cargo of manila hemp and spices from the port of Manila to New York. To London.

PORTO RICO.

26. Position: Porto Rico, an island of the Lesser Antilles, is located east of Cuba in the Atlantic.

It is about as large as the State of Connecticut.

27. Products: Sugar, coffee, oranges, bananas.

28. City: San Juan is the principal city founded in 1511 by Ponce de Leon.

29. Government: It is a dependency of the United States.

GUAM.

30. P. 122, no. 126.

TUTUILA.

31. P. 123, no. 126.

WAKE.

32. P. 123, no. 126.

ST. THOMAS, ST. JOHN, ST. CROIX.

33. P. 123, no. 126.

PANAMA CANAL ZONE.

34. P. 123, no. 126.

Describe the route by which the products of Alaska reach Chicago or Washington. Why is sugar refining a large business at San Francisco?

BRITISH AMERICA.

Mighty stretch of land extending upward to the Arctic clime,

Land of stately elm and poplar, land of oak and tow'ring pine.

Land where pastures are the greenest, land of wheatfields vast and fair,

Land where rivers teem with salmon, land of marten fox and bear.

Position.

1. British America comprises about one-third of the continent of North America. (P. 94, no. 8). Its chief divisions are the Dominion of Canada and the Province of Newfoundland.

The Dominion of Canada occupies all the northern part of North America except Alaska and a part of Labrador. (42° — 86° N. latitude; 52° — 142° W. longitude).

Boundary.

2. Boundary: Canada is bounded on the
 - a. North, by the Arctic ocean, Hudson bay and Atlantic ocean;
 - b. East, by the Atlantic ocean and Gulf of St. Lawrence;
 - c. South, by the United States and Great Lakes;
 - d. West, by the Pacific ocean and Alaska.
3. Its coast is irregular containing fine harbors.

The northern coast is little known.

Coast Forms of Land and water.

From Geography Island to Queen Charlotte Islands.

Peninsulas, Capes, and Islands.

4. Geography island, is in the mouth of the Mackenzie river.
5. Bathurst is a cape in northwestern Canada.
6. Arctic archipelago, is a group of islands north of North America. Baffin Land is the largest island of the group.
7. Southampton is a large island at the entrance to Hudson bay.
8. Greenland, p. 18, no. 8 a.
9. Farewell, p. 73, no. 54.
10. Labrador, p. 73, no. 56.
11. Chidley or Chudleigh, p. 73, no. 57.
12. Newfoundland, p. 73, no. 58.
13. Race, p. 73. no. 59.
14. Newfoundland Banks, p. 73, no. 60.
15. Anticosti and Prince Edward are islands in the Gulf of St. Lawrence.
16. Cape Breton, p. 73, no. 61.
17. Novo Scotia, p. 73, no. 62.
18. Sable, p. 73, no. 63.
19. Vancouver p. 74, no. 83.
20. Queen Charlotte, p. 74, no. 83.

From Mackenzie Bay to Puget Sound.

Seas, Gulfs, Sounds, and Straits

21. Mackenzie bay, is in northeastern Canada at the mouth of the Mackenzie river.
22. Banks strait, p. 69, no. 24.
23. Melville sound, p. 69, no. 25.

24. Baffin bay, p. 69, no. 26.
25. Davis strait, p. 69, no. 27.
26. Hudson strait, p. 69, no. 28.
27. Hudson bay, p. 69, no. 29.
28. Belle Isle strait, p. 69, no. 30.
29. St. Lawrence gulf, p. 72, no. 31.
30. Fundy bay, p. 72 no. 32.
31. Juan de Fuca strait, p. 72, no. 44.
32. Puget sound, p. 72, no. 45.

Relief.

33. The relief of Canada is similar to that of the United States.
34. Lawrentian plateau, p. 75, no. 88.
35. Arctic plain is the northern part of the Great Central Lowland of North America. P. 75, no. 89.
36. The northern part of the Pacific Highland System traverses the western part of Canada.
37. The principal ranges are:
 - a. The Rocky mountains, p. 75, no. 92 b.
 - b. The Cascade Range, p. 76, no. d.
38. The highest peaks are Mts. Brown and Hooker in the southwest.
39. Pacific Plain, p. 75, no. 91.

Drainage.

40. The Arctic Slope, p. 77, no. 104.
41. The Hudson bay slope, p. 77, no. 105.
Where does the Red river of the North rise? P. 99, no. 19.
42. The Atlantic slope, p. 77, no. 106.
43. The Pacific slope is drained chiefly by:
 1. The headwaters of the Yukon, p. 78, no. 109, a.
 2. By the Frazer river flowing southward into Queen Charlotte sound between Vancouver island and Canada.
 3. By the headwaters of the Columbia river, p. 78, no. 109, b.
In what province do the Yukon and the Columbia river rise?
44. Lakes, pp, 80, 81, nos. 116 — 120.

Climate.

45. Canada has long, severe winters and short, hot summers. The western part is warmer than the eastern. Why? p. 29, no. 110 a. (last sentence.)

Products.

46. The northern part of Canada is unproductive. The southern part is similar to that of the northern part of the United States.

47. 1. The principal agricultural products are wheat, oats, barley, and fruit in the Central plain, or "fertile belt," which embraces millions of acres between Lakes Winnipeg and Athabasca, and the Rocky mountains;

2. Lumber, from the great forests extending throughout the southern and western parts;

3. The principal animal productions are dairy products chiefly from the St. Lawrence valley; fish from the Great Lakes, St. Lawrence river, and waters bordering Nova Scotia and Newfoundland, p. 73, no. 58., and from the Pacific ocean; skins and furs from the wild animals found in the forests and northern regions; whale walrus, and seal blubber, and whale-bone and ivory from animals living in the northern waters.

From what animals are whale-bone and this ivory obtained?

48. Name six industries largely pursued in Canada.

Why is ship-building a great industry in Canada? Canada produces more cheese for export than any country in the world. It also ranks first in the value of its fisheries.

Commerce.

49. The commerce of the country is extensive and is carried on chiefly with England and the United States.

50. It exports cattle, grain, and cheese mostly to England. Why not to the United States? Its lumber, metals, coal and fish are sold to the United States. Why not to England?

51. Canada imports from the United States iron and steel goods, machinery, farm tools, petroleum and cotton.

52. The Canadian Pacific Railroad extends from Halifax in Nova

Scotia, to Vancouver in British Columbia. At each of these ports steamship connections are made with European and Asiatic ports. The Grand Trunk Railway system connects the cities along the Great Lakes and on the St. Lawrence with the Atlantic seaboard.

53. The Red River of the North and the Saskatchewan traverse the "fertile belt," and with Lake Winnipeg and Hudson bay furnish a continuous water route to the ocean during the summer. The wheat lands of the West have attracted a vast number of immigrants, many of them going from the United States.

54. How can a boat loaded with lumber leave Toronto and reach New York city without going to sea?

People.

55. The population of Canada is about five million (5,372,000) of which number about 100 thousand are Indians.

Most of the inhabitants of Canada are of British descent. A large population in the southeast, however, are descendants of the early French immigrants and profess the Roman Catholic faith. Indians and half-breeds are found in the west and northwest, and some scattered tribes of Eskimos live along the Arctic coast.

56. The Catholics of Canada number over two million (2,229,690), which forms about forty-two per cent of the total population. Of these Catholics about three fifths live in the province of Quebec.

In the ordinary intercourse of life, Catholics and Protestants live in concord and work together harmoniously for the common welfare of Canada.

Political.

27. The government is somewhat similar to that of the United States. The Dominion is governed by a Parliament, or Congress, and a Governor-General.

The Congress is composed of the lower House representing the people, and of the upper House, appointed by the Governor-General. The Governor-General is appointed by the British Sovereign.

58. The Provinces of Canada and respective Capitals are:

1. British Columbia, Victoria, on Vancouver island;
2. Manitoba, Winnipeg, on Red river of the North;
3. Ontario, Toronto, on Lake Ontario;
4. Quebec, Quebec, on St. Lawrence river;

5. New Brunswick, Frederickton, on St. John river;
 6. Nova Scotia, Halifax, on the Atlantic ocean;
 7. Prince Edward Island, Charlottetown, on Northumberland.
- Newfoundland, with eastern Labrador, forms a British colony independent of Canada.
8. Newfoundland, St. John's on the Atlantic ocean.
 59. Ontario, with Quebec second to it, are the most populous, productive, and prosperous of the provinces.

What do you think are the leading industries in these provinces?

60. Noted cities are:

1. Toronto, in Ontario, on Lake Ontario, is the largest port in Canada, and is noted for its manufactures and schools.
 2. Ottawa, in Ontario, on the Ottawa river is the capital of the Dominion and is the first lumber manufacturing city in Canada.
 3. Montreal, on the St. Lawrence river, in Quebec, is the largest city and manufacturing center of Canada.
 4. Quebec, in Quebec, on the St. Lawrence river, is the oldest city of Canada, founded 1609, by Champlain.
- Quebec is a walled town situated on a high bluff, and is so strongly fortified that it is called the "Gibraltar of America".
5. St. Johns, in Brunswick, on the bay of Fundy, is a great seaport.
 6. Halifax, in Nova Scotia, on the Atlantic, is the principal naval store (p. 136, no. 181) of Great Britain on this side of the Atlantic. The harbor of Halifax is unsurpassed in the world.

The shores of Nova Scotia and New Brunswick are washed by the tides of the bay of Fundy. These tides are the highest in the world, sometimes reaching the enormous height of sixty feet above low-water mark.

DANISH AMERICA.

Land of icebergs, glaciers, snows,
Where the North-wind fiercely blows.

1. Danish America comprises Greenland, Iceland, and their outlying islands.
2. What important small circle crosses over southern Greenland and north of Iceland?
3. In what zones is Greenland? In what zone is Iceland?
4. Danish America belongs to Denmark.
5. Greenland is one-fourth as large as the United States. Except

a narrow strip of the coast in the south, it is one great sheet of ice forming the greatest glacier in the northern hemisphere.

6. Greenland has a scanty vegetation consisting of mosses, lichens, and a few stunted trees.

7. Nearly all the inhabitants of Greenland are Eskimos.

8. The principal exports are seal blubber, seal-skins, eiderdown, whale oil whale-bone, and fish, exported to Denmark during August.

9. The chief settlements of Greenland are on the western coast. Godhaven is the most important port. Upernavik, 72° north latitude, is the most northerly abode of civilized man.

10. The beautiful Aurora Borealis, p. 13, no. 52. "Land of the midnight Sun," p. 13, no. 52.

11. Greenland is governed by Danish officers.

12. Iceland is situated 250 miles east of Greenland. The warm winds render the southern side habitable and adapted to grazing and some farming.

13. Mt. Hecla is an active volcano, and near it are noted geysers.

14. The inhabitants are descendants of the Northmen and are intelligent and thrifty.

15. The principal industries are:

Raising of vegetables and stock on a small scale; collecting eiderdown, and fishing.

16. Iceland exports sulphur, Iceland spar, ponies, wool, eiderdown and feathers.

Spar is a non-metallic mineral usually cleavable and sometimes lustrous. Eiderdown is the soft, white feathers obtained from black and white eider ducks. It is used as wadding for quilts, for trimming cloaks, for collars, muffs, wraps, etc. The eiderdown is collected from the nests where it serves as lining.

17. The people govern themselves, but acknowledge the supremacy of Denmark.

18. Reikiavik, "steam town," on the southern coast, is the capital.

It contains a college and a public library.

MEXICO.

Mexico, sweet land of flowers,
Of rippling streams and shady bowers,
Of cactus plant and cypress tree,
Of humming bird and honey bee.

Position.

1. The republic of Mexico is south of the United States. 15° — 32° north latitude; 87° — 117° west longitude.

2. Mexico is about one-fourth the size of the United States.

Boundary.

3. Mexico is bounded on the

a. north, by the United States;

d. east, by the United States, Gulf of Mexico, Central America, Caribbean sea;

c. south, by Central America, Pacific ocean;

d. west, by the Pacific ocean.

Coast Forms — Land and Water.

Peninsulas, Capes, Isthmus.

4. Yucatan, p. 74, no. 71.

5. Catoche, p. 74, no. 72.

6. Tehuantepec, p. 21, no. 41 b.

7. Corrientes, p. 74, no. 75.

8. Lower California, p. 74, no. 76.

9. San Lucas, p. 74, no. 77.

Seas, Gulfs, Channels.

10. Mexico, p. 72, no. 35.

11. Yucatan, p. 72, no. 36.

12. Caribbean, p. 29, no. 112.

13. Honduras, p. 72, no. 38.

14. Tehuantepec, p. 72, no. 41.

15. California, p. 72, no. 42.

Relief.

16. a. The western and central part is a high plateau crossed by several ranges of snow-capped mountains.

b. The eastern coast is a low plain.

17. The Sierra Madre, in the west, is the principal mountain range. P. 76, no. c.

18. The principal mountain peaks are:

- a. Volcano Popocatepetl, p. 76, no. 98.
- b. Volcano Orizaba, p. 76, no. 96.

Drainage.

19. The principal rivers are:

- a. The Rio Grande which separates Mexico from Texas, United States. P. 78, no. 108.
- b. The lower course of the Colorado river. P. 78, no. 109 c.
- c. The Grande de Santiago, in the southeast, flows into the Pacific ocean, north of Cape Corrientes.

The rivers of the plateau do not generally reach the ocean, though a few reach the Pacific through great gorges in the Sierra.

20. The principal lakes are:

Lake Chapala, in west central Mexico, and Lake Texcoco, in the south central part; on the western shore of which the city of Mexico is situated.

Climate.

21. What important small circle crosses Mexico? In what zone is it?

The climate is hot and unhealthful along the coast, but mild and healthful in the interior. Explain.

22. There are two seasons. The rainy season lasts four months, beginning in May. Explain. P. 38, no. 202 a.

Productions.

23. The principal products of the soil are:

- a. Mahogany and other cabinet woods from the lowland forests; p. 85, no. 166 b.
- b. Cotton, indigo, coffee, cacao, vanilla, and tropical fruits from the hot lands;

A blue dye-stuff is obtained from the indigo plant. Chocolate is made from the cacao bean, the fruit of a species of ever-green tree.

c. **Maguey**, from the plains of Yucatan;

The maguey is a species of cactus. Its leaves serve the Aztec Indians as paper. Its juice, when fermented, is the national alcoholic drink. One variety of this plant yields a kind of hemp called, from the place of its export, sisal hemp.

d. **Indian corn, cotton, coffee, tobacco, and grain** from the cool belt, or the interior plateau.

In the production of corn, Mexico ranks fourth in the world.

24. **Millions of horses, cattle, sheep, and goats** are raised on the ranches of Mexico.

Sheep are raised for their wool, which is of a very fine quality.

25. **Gold, silver, copper, lead, and quicksilver** are obtained from the table-land.

This part of the western highland of North America, may be called the metal producing treasury of the Western Hemisphere,

Mexico produces about one-third of the silver of the world and is the second nation in the production of copper.

Commerce.

26. **Jasper, Mexican onyx, and other gems and precious stones** are found and exported.

27. **Mexico exports sisal hemp** to New Orleans, New York, and Mobile; **copper and lead ores** to the United States to be smelted; **hides, vanilla, and mahogany** chiefly to the United States.

28. **Mexico imports mining machinery, timber, explosives, and cotton textiles** from the United States.

29. **What do you think are the principle industries of Mexico?**

People.

30. **The population of Mexico** is over thirteen million, about one-sixth of that of the United States.

31. **The Spaniards** are the leading race of Mexico, and form about one-half of the population of the country. The rest of the population are of mixed Spanish and Indian blood. The Roman Catholic religion prevails. The Spanish language is the language of the country.

Mexico, termed the "Italy of the Occident," is noted for its general progressiveness. Even at the end of the first century of its history, the five thousand miles stretch of its territory was covered with churches, schools, courts of justice aqueducts and roads, so splendid, as still to cause the wonder of the traveler.

In 1536 the first printing-press in the New World was set up in Mexico.

Position.

32. Mexico was a Spanish colony until 1821 (about three hundred years), when it became independent of Spain. It is now a Federal Republic composed of twenty-seven states, two territories, and a Federal District.

33. Mexico is the capital of the country. It is situated on a table land over seven thousand feet above the sea, and is surrounded by lofty mountains. It is a very ancient city, and was discovered by Cortez. It is noted for its many beautiful buildings among which is the cathedral of Mexico, built by the early Spaniards and still used by the Catholics as a place of worship. It is one of the most famous and beautiful buildings of the Western Hemisphere. This city has numerous factories producing coarse cloths, leather, cigars, and other articles which are consumed at home.

The city of Mexico is connected with the United States by two trunk lines.

34. Leon, northwest of the city of Mexico; Morelia, west of it; Pueblo, southeast of it; Queretaro, northwest of it are centers of manufacture.

35. Oaxaca, southwest of the city of Mexico is the center of coffee, sugar, and chocolate industries. It is celebrated for cochineal, and its coffees are the finest produced in the Americas.

Cochineal is a scarlet dye-stuff made from the dried body of insects that live on a certain kind of cactus.

36. Tampico and Vera Cruz, on the Gulf of Mexico; Carmen, on Carmen island, in Campeche bay; Sisal and Progreso, northern Yucatan, on the Gulf of Mexico, are the chief seaports on the Gulf coast.

37. Guaymas on the Gulf of California; Mazatlan, Manzanillo, and Acapulco are the chief seaports on the Pacific.

All these ports are connected with the United States by steamship lines.

The ruins of many ancient cities are still in existence. More than two thousand years ago there were many flourishing cities in Mexico. These cities were built by the Indians.

CENTRAL AMERICA.

1. Central America occupies the extreme southern portion of

North America and lies between the Caribbean sea and the Pacific ocean (9° — 17° north latitude; 83° — 92° west longitude).

2. Central America is bounded on the

- a. north, by Mexico and the Caribbean sea;
- b. east, by the Caribbean sea and Panama;
- c. south, by the Pacific ocean;
- d. west, by the Pacific ocean and Mexico.

3. Caribbean, p. 29, no. 112.

4. Honduras, p. 72, no. 38.

5. Cape Gracias. Dios an eastern projection on the Caribbean sea.

6. Mosquito bay, p. 72, no. 39.

7. Darien gulf is an arm of the Caribbean sea, and indents Panama and South America.

8. Panama, p. 72. no. 40.

9. Panama, p. 21, no. 41.

10. Marito, p. 74, no. 74.

11. Tehuantepec, p. 72, no. 41.

12. Relief p. 147, nos. 16 and 17.

It is situated in the belt of volcanoes called the "circle of fire". P. 24, no. 63.

13. The only important river is the San Juan, the outlet of Lake Nicaragua.

14. In what zones is Central America?

15. The principal products of the soil are:

Coffee, bananas, cacao, sugar, indigo, tobacco. vanilla, india rubber, mahogany, rosewood, and dyewood.

16. The principal minerals are:

Gold, silver, copper, mercury.

17. Central America exports, chiefly to the United States, coffee, bananas, indigo, rubber, hides, and mahogany.

18. Central America imports from the United States, flour, meats, cloth, iron goods, and machinery.

19. What do you think are the principal industries of Central America?

20. The population of Central America is nearly equal to that of the state of New York, nearly four million.

21. The dominant race is Spanish; the religion is the Roman Catholic; the language, Spanish.

22. Central America once belonged to Spain; now it is composed of six independent republics and the British colony of Belize.

23. Republics of Central America and their respective capitals:

1. Nicaragua, Managua;
2. Honduras, Tegucigalpa;
3. Guatemala, New Guatemala;
4. Costa Rica, San Jose;
5. Salvador, San Salvador;
6. Panama, Panama;
7. British Colony Belize, Belize;

24. Panama is the most important country in Central America: goods in transit between the Atlantic ports of North America or Europe and the Pacific ports of the Americas and Asia are transferred by rail from Colon across the isthmus of Panama to Panama city.

25. What two cities will the cities of Panama and Colon resemble after the completion of the Panama canal? P. 58, no. 24 a.

26. What can you say about the Panama canal and the changes it will work in the commerce of the world? P. 59, no. f.

27. New Guatemala, in Guatemala, is the largest city of Central America.

West Indies

1. The West Indies are an archipelago southeast of the United States in the Atlantic ocean.

2. What circle nearly marks the northern latitude of Cuba? The 20th parallel nearly marks the southern latitude of Cuba. It crosses northern Africa and southern Asia.

3. Latitude, 10° — 27° , north.

Longitude, 60° — 85° , west.

4. The area of the West Indies is over 91 million square miles.

5. The waters surrounding the West Indies are:

The Atlantic ocean, Caribbean sea, Yucatan channel, Gulf of Mexico, Florida strait.

6. All of these islands are mountainous, except the Bahamas

which are low coral islands.

7. The West Indies, with the exception of the northern Bahamas, are in the torrid zone. They have a hot climate and during the summer months, an abundant rainfall.

8. Productions: The sugar crop is of more value than all other crops combined. Next in order is tobacco. The people depend largely for food upon the yam, a sort of sweet potato, the plantain, and the banana.

Cuba ranks first in the world in the production of cane sugar. Its tobacco and cigars are the finest in the world. Its forests produce valuable woods, and its mines, copper and iron.

Turtles, sponges, pine-apples, cotton, and sisal hemp are exported from the Bahamas.

9. Exports: The sugar crop of Cuba and the other islands is almost entirely sold to the United States: Tobacco, tropical fruits, coffee, and ginger are the exports.

10. Imports: The West Indies import coal, lumber, cotton goods, and iron and steel from the United States.

11. The population of the West Indies is about 6,750,000. The inhabitants are mostly negroes or descendants of Spanish settlers.

12. The West Indies consist of three groups:

a. The Bahama islands form the northern group of the West Indies and belong to Great Britain.

b. The greater Antilles form the central group of the West Indies and include the largest islands of the group.

1. Cuba is a republic protected by the United States. Havana, in the northeast, is the largest city of the West Indies. Santiago de Cuba, in the south, is next in size.

2. Haiti comprises the two independent negro republics of Haiti and Santo Domingo. Santo Domingo, the capital of Santo Domingo, is the oldest city, founded by Europeans, in the New World. —1504. Port au Prince is the capital of Haiti.

3. Jamaica belongs to Great Britain and is the third of the West Indies in size. Kingston, in the south, is the capital.

4. Porto Rico belongs to the United States. San Juan, on the northern coast, founded 1511 by Ponce de Leon, is connected with Penco on the southern coast by a fine macadamized road.

c. The Lesser Antilles form the southeastern group of the West Indies. They extend in a curve from the mouth of the Orinoco river in South America to Porto Rico, and are divided into the Leeward and Windward islands. They belong to the following nations: France, Great Britain, The Netherlands, Venezuela, in South America, and the United States.

Trinidad almost joins South America. It is celebrated for a lake of pitch, or asphalt, from which immense quantities are taken to make the composition with which many of our sidewalks and streets are paved.

12. The Bermudaislands, p. 73, no. 67. These islands export large quantities of easter-lilies, onions, and potatoes.

QUESTIONS FOR CLASS USE.

The United States.

Mathematical.

Recite poem.

1. Locate the United States. What are its latitude boundaries? Its longitude boundaries? Name a city having the same latitude as the northern United States. What countries of Europe have about the same latitude as the United States? Of Asia?

Bound the United States. What is the greatest extent of the United States from the Atlantic to the Pacific? From north to south? What is the area of the United States? What part of the area of North America does it include? Compare the United States in area with other countries.

Physical.

9. Describe the Atlantic coast. The Pacific coast.

10. Name and locate the gulfs, bays, sounds, and straits, on the Atlantic ocean and Gulf of Mexico. On the Pacific ocean. On the Great Lakes.

11. Name and locate the capes, peninsulas, and islands on or in the Atlantic and the Gulf of Mexico. On or in the Pacific.

Relief.

12. Name and describe in order from east to west the physical regions of the United States.

13. Name the three ranges of the Atlantic Highland. Name and describe the

eight groups into which these ranges are divided. Name the principal peaks of the Appalachian system. Name and locate the noted peaks of the Pacific Highland.

Drainage.

16. How is the Atlantic slope drained? Name and locate ten rivers draining the Atlantic slope. By what river system is the Gulf of Mexico drained? Name the two principal eastern branches of the Mississippi. Three principal western branches. What other less important rivers drain the Gulf slope? What can be said of the rivers draining the Lake slope? By what rivers is the Pacific slope drained?

21. Describe the Great Basin. What can be said of the state of Colorado regarding the sources of rivers? In what is it similar to Switzerland?

22. Name the principal watersheds and state what river system each divides. Where are the lakes of the United States most numerous? Name and locate the more important lakes. The more important deserts. The Great Plains. The rolling prairie and wooded lands. Name and locate five noted waterfalls. Two noted caves. The palisades. The Grand Canon. Geysers and hot springs. The Yellowstone National Park.

Climate.

33. What can be said of the variety of climate in the United States? Describe the climate of the region bordering the Pacific ocean. Of the Pacific Highland. Of the Appalachian Highlands. Of the region along the Atlantic seaboard. Locate and describe the regions having a very heavy rainfall. Where is the dry section? What can be said of the climate in the eastern and northeastern parts of the country? What are cyclones? Where do our cyclones generally originate? Why are the Great Lakes a storm center?

United States Weather Bureau.

36. What can you say of the United States Weather Bureau? How does it give its warnings? Explain the meaning of these signal flags.

Industrial Sections and Groups.

37. How is the United States divided into sections? Into what six sections is it divided? Name the states of each of the six sections giving the capital, metropolis, and chief productions of each state. Name the territories and outlying possessions with the capital, metropolis, and chief production of each.

40. Describe the District of Columbia.

41. Name the states on the Atlantic. On the Gulf of Mexico. On the Pacific. Those bordering on Canada. Of what states does the 45th parallel from the boundary. Name the states crossed by 45th parallel. A belt extending across the United States between the 40th and 45th parallels would mark what crop region?

48. What two states touch both sides of the Mississippi? Name the states on the east bank of the Mississippi river. On the west bank. Name the states on the north and south banks of the Ohio river. What states would one cross, going directly west from New York. Name six rivers crossed in a direct trip west from New York city to the Pacific.

Products.

Agricultural Products of the United States.

54. In what zone is the United States.

55. Describe the crop belts into which this zone is divided. If one were to travel directly south from the northern boundary of Minnesota to the Gulf of Mexico, name in order the states and great crop belts one would cross.

61. Where are sugar-cane, sugar beets, rice, oranges, peaches, apples, peanuts, and timber largely produced?

65. In what states are horses most extensively raised? Cattle and hogs? Cattle and sheep? Where is cattle raising an important industry? Where are cattle reared for meat? For hides? For dairy products? Where is dairying an important industry?

69. From what waters are cod-fish obtained? Salmon? Herring? Sardines? Oysters? Sponges? What country is the center of seal fisheries? What fish are found in the lakes and rivers?

73. How does the United States rank with the other leading countries of the world in the production of cotton? Corn? Wheat? Oats? Barley? Rye? Tobacco? Lumber? Cattle? Swine? Sheep? Wool? Fish?

86. Discuss the value of mineral wealth to a country. How are the arts classified? Name the states noted for the production of iron. Silver. Gold. Copper. Nickel. Zinc. Lead. Mercury. Aluminum. Coal. Petroleum. Gas. Salt. Granite. Slate. Marble. Limestone. Where are graphite and whetstone obtained?

106. How does the United States rank with the other leading nations in the production of iron and steel? Gold? Silver? Copper? Coal? Petroleum?

Where are the best cement works? How is clay utilized? Where are the most extensive pottery manufactories?

History.

112. Who discovered America? Tell about the early explorations and settlements of England. Spain. France. State briefly some facts concerning the growth, development, and final independence of the thirteen colonies. Give the original extent of the United States and tell what accessions have been made since 1789.

Religion.

114. Speak briefly on the beginning and the growth of Catholicity in the United States.

Education.

115. What provision is made for education in the United States? Name some noted institutions. Tell about the educational work conducted under the direction and influence of the Catholic Church. Name some noted Catholic universities.

People.

119. What is the population of the United States? Speak briefly on the different races of mankind under the control of the United States.

Government.

121. Describe the government of our country. What is the constitution, and for what does it provide? How is each state governed? Each territory?

125. How are the Indians governed? Locate and describe the out-lying possessions of the United States.

Commerce.

127. What transportation facilities has the United States? To what condition may be attributed the fact, that the United States ranks foremost in the production of salable articles? Answer questions in footnote following no. 128, p. 123.

129. Give the industries of the United States in order of importance. How does the United States rank with other nations in foreign trade? In domestic trade? With what countries is our largest foreign trade? What are the principal articles of export in this trade? Through what city do one-half of our exports go? To what country do one-half of our exports go? Why do we import cotton? Why tobacco? Name our most valuable imports. From what countries imported? What are breadstuffs? Provisions? Name our chief seaports and give the principal articles exported from each. What is a port of entry? Name and describe the principal lake ports. River ports. Account for the growth and location of St. Paul and Minneapolis. What is an arsenal? What is meant by "cool belt"? "Warm belt"? Name some products of each of these belts. What conditions led to the location and growth of New Orleans?

Transportation.

136. What is transportation? What are the land routes of transportation? Water routes? Who owns the railroads in the United States? What is the railroad mileage in the United States? Name and locate the principal railroads of the United States. What do trains going east carry? Those from Missouri and Kentucky? From

Ohio and adjoining states? From what states are coal trains generally bound? Trains carrying fresh meat and fruit? Those carrying petroleum? What do railroads from the South transport to ports on the Gulf and Atlantic sea-board? With what are northward bound trains likely to be freighted? What do trains running westward carry? Are they as heavily laden as those going eastward? What do boats carry over the Mississippi? Over the Great Lakes? The Erie canal? The Soo canal? What goods of ours do steamships carry to foreign countries? From what ports, to what countries are they carried? What goods are brought back in return? How are the rivers and lakes of our country connected? Locate and describe the Erie canal. The Welland canal. Other leading canals.

Standard Time.

148. Describe fully Standard Time. Name and locate the Standard Time belts. What places are generally selected for changing time? Prove that 15 degrees of longitude correspond to one hour of time. About how many hours are required to carry the United States past the sun?

Miscellaneous.

Cities.

Atlantic Coast.

150. Locate and describe New York. What does it export? Where to? What part of our exports are sent from New York? Locate and describe Philadelphia. What does it export? Where to? Locate Boston. Why distinguished? What does it export? Where to? Locate Baltimore. What does it export? Where to? Locate Washington. Why important?

Pacific Coast.

151. Locate San Francisco. What does it export? Where to? Locate Los Angeles. Describe Tacoma and Seattle. What railroads terminate at Seattle? Locate Oakland. Why noted? Locate San Diego. Portland.

152. Name and locate ten leading inland cities of the United States.

153. Name and locate ten of the largest cities of the United States in order of population.

154. Give three reasons why a large city should have grown up at New York.

155. Why should a large city have grown up at Philadelphia?

156. Why should a large city have grown up at Boston?

157. Name some cities not located on salt water, still having a very extensive commerce.

158. What cities of the world have about the same latitude as your home city or village?

159. Name the chief export points of the cotton belt.
160. What leading cities of the United States are in the same latitude as Lisbon in Portugal?
161. For what are the following cities noted: Pittsburg, Pa.? Waterbury and Birmingham, Conn.? Brattleboro, Vt.? Gloucester, Mass.? Waterbury, Conn. and Elgin, Ill.?
166. What rivers on the Atlantic coast are useful on account of their manufactures? On account of their commerce?
167. What state has the greatest variety of climate?
168. What state sends a part of its drainage to the Arctic ocean, part to the Atlantic ocean, and part to the Gulf of Mexico? Explain.
169. How many stars in our flag?
170. A line drawn so as to separate the drainage waters of the St. Lawrence system from others, would pass through what states? Which of the states of the Atlantic slope send a part of their drainage waters into the Mississippi river.
172. What states west of the Mississippi river send only a part of their drainage into it? What states farther north than Wisconsin? What state has the greatest extent of lake shore? Of sea shore?
174. What river is the outlet of Lake Champlain?
175. What countries surpass the United States in extent?
176. Which is the most eastern city of the United States? Which is the smallest state? The largest state?
178. What cities of the world are on or near the 40th parallel north latitude?
179. What states rank foremost in the production of iron? Of textiles?
181. What are naval stores? Locate the pine belt noted for its naval stores.
- For what is Savannah, Georgia, noted?
- Answer search questions on page 136.
- Give a geographical toast such as might be rendered at a merchants' banquet.

Outlying Territories and Colonial Possessions of the United States.

Alaska.

1. Position. 2. Bays, seas, and sounds. 3. Islands. 4. Capes and peninsulas. 5. Mountains. 6. Rivers. 7. Climate. 8. Important products. 9. People. 10. Government.

Hawaiian Islands.

11. Position. 12. Mountains. 13. Climate. 14. Products. 15. Area. 16. People. 17. City. 18. Government.

Philippine Islands.

19. Position. 20. Climate. 21. People. 22. Products. 23. Chief industries, 24.

Government. 25. Cities. Trace a cargo of manila hemp from the port of Manila to New York. To London.

Porto Rico.

26. Position and size. 27. Products. 28. City. 29. Government. 30. What can be said of Guam? Tutuila? Wake? St. Thomas, St. John, and St. Croix? Panama Canal Zone?

British America.

1. What portion of the continent does British America comprise? What are its chief divisions? What part of North America does the Dominion of Canada occupy?
2. Name the boundaries of Canada.
3. Describe the coast.

Coast Forms of Land and Water.

4. Trace and describe the peninsulas, capes, and islands from Geography island to Queen Charlotte islands.
21. Trace and describe the seas, gulfs, sounds, and straits from Mackenzie bay to Puget sound.

Relief.

22. Beginning at the Atlantic Coast, describe the relief of Canada and name the rivers that drain its slopes.

Climate and Products.

45. Describe the climate of Canada.
46. What can be said of the productiveness of Canada?
47. What are the principal agricultural products of Canada? The principal animal productions?
48. Name six industries largely pursued in Canada. Why is ship-building a great industry in Canada? How does Canada rank in the production of cheese? In the value of its fisheries?

Commerce.

49. Discuss the commerce of Canada, naming exports and imports.
52. Describe the great commercial routes of Canada.
54. How can a boat loaded with lumber leave Toronto and reach New York

city without going to sea?

People.

What is the population of Canada? What can be said of the people of Canada? Of Catholicity?

Political.

58. Discuss the government of Canada. Name, with their capitals, the political divisions of Canada. How is Newfoundland governed?

59. Which of the provinces are the most populous and productive? What do you think are the leading industries in these provinces?

60. Name, locate, and describe the six most populous cities of Canada. Why is Quebec called the "Gibraltar of America"? Locate the bay of Fundy. What can be said of the tides in this bay?

Danish America.

1. What does Danish America comprise?

2. What important small circle crosses southern Greenland and north of Iceland?

3. In what zones is Greenland? In what zone is Iceland?

4. To what country does Danish America belong?

5. How does Greenland compare with the United States in size? Describe the surface of Greenland. The vegetation. Inhabitants. Principal exports. Chief settlements.

8. Which is the most important port of Greenland? What city is the most northerly abode of civilized man?

10. What is the Aurora Borealis?

11. How is Greenland governed?

12. Locate Iceland. What part is habitable?

13. What active volcano is in Iceland?

14. Tell about the inhabitants. What are the principal industries? Principal exports? What is spar? What is eiderdown? Tell how it is collected and used.

17. How is Denmark governed? What is the capital?

Mexico.

1. What is the position and extent of Mexico? How does it compare with the United States in size?

3. Bound Mexico.

Coast Forms. Land and Water.

4. Locate and describe the peninsulas, capes, and isthmus on the coast of Mexico.

10. Locate and describe the seas, gulfs, and channels on the coast of Mexico.

Relief.

Locate and describe the plateau of Mexico. The low plain. The mountains. The high peaks.

Drainage.

Name and locate the principal rivers and lakes.

Climate.

What important small circle crosses Mexico? In what zone is Mexico? Why is the climate hot and unhealthy along the coast, but mild and healthful in the interior? How many seasons are there?

Productions.

22. What are the principal productions of the soil? What is obtained from the indigo plant? From the cacao bean? Tell the different uses of the maguey plant. How does Mexico rank in the production of corn?

24. What may be said of ranching in Mexico?

25. What may be said of the mineral productions? What may this part of the highland of North America be called? How does Mexico rank in the production of silver? Of copper? What may be said in regard to the production of precious stones?

27. Name some Mexican exports and tell to what countries exported

28. What does Mexico import from the United States?

29. What do you think are the principal industries of Mexico?

People.

Give the population of Mexico. How does it compare with that of the United States? Which is the leading race in Mexico? What religion prevails? What is the language of the country? What may be said as to the progress of Mexico? Where was the first printing press in the New World set up?

32. Discuss the history and the government of Mexico.

33. Describe the city of Mexico; Leon; Oaxaca. What is cochineal? Name and locate the chief seaports on the Gulf of Mexico. On the Pacific. How are these ports connected with the United States? What may be said about the ancient cities of Mexico?

Central America.

1. Give position and extent of Central America. 2. Boundary. 3. Describe the Caribbean Sea. 4. Honduras. 5. Cape Gracias Dios. 6. Mosquito bay. 7. Darien. 8. Gulf of Panama. 9. Isthmus of Panama. 10. Mariato. 11. Tehuantepec. 12. Relief. In what belt of volcanoes is Central America situated?

13. Name the only important river in Central America.
14. In what zones is Central America?
15. Give the principal products of the soil. 16. Principal minerals. 17. Exports. 18. Imports. 19. What do you think are the principal industries? What is the population? The dominant race? Religion? Language? 22. Government? 23. Name the political divisions and give their capitals.
24. Describe Panama. What two cities will the cities of Panama and Colon resemble after the completion of the Panama canal?
26. What can be said about the Panama canal and the changes it will work in the commerce of the world?
27. Which is the largest city of Central America?

West Indies.

1. Locate the West Indies. What circle nearly marks the northern latitude of Cuba? What parallel nearly marks the southern latitude?
 3. Give the latitude of the West Indies. Longitude. Area.
 5. What waters surround the West Indies? 6. Describe the surface.
 7. In what zones are the West Indies? Describe the climate.
 8. What can be said about the productions of Cuba? Principal exports of the Bahamas?
 9. What are the principal exports of the West Indies? Imports?
 11. What is the population of the West Indies? To what races do the people belong? How many groups of islands do the West Indies comprise? Locate the Bahama islands. To what country do they belong? Locate the Greater Antilles. What can be said of Cuba? Haiti? Jamaica? Porto Rico? Describe the Lesser Antilles. To what nation do they belong? For what is Trinidad celebrated? 12. Describe the Bermuda islands and name their exports.
-

South America.

By Capricorn and midway line this continent is crossed,
 By oceans two, her eastern shore and western coast are washed.
 Her mountains unto heights sublime their stately crests do rear,
 With snows eternal crowned are they, throughout the livelong year.
 Her northern part is ramified by many waterways,
 Which, forming inland networks vast, both lace and interlace.
 The great Brazilian forests deep, the pampas too, as well,
 The llanos stretching northward, each of varied climate tell.
 And o'er her plains, unchecked, unreined, the wild horse freely roams,
 While tapir, bear, and monkey tribes in forests make their homes.
 Her trackless forests dense and dark, where human foot scarce trod,
 Her mountains high, her rivers broad, all tell how great is God.
 And in a language of their own speak of the Hand divine,
 That sways the scepter of His love above this southern clime.

(The study of South America is V. Grade work.)

What and Where.

Mathematical South America.

1. South America is the fourth in size of the continents, and has nearly twice the area of the United States. It is located in the southern part of the Western Hemisphere and extends from 12° north of the equator to 56° south, and from the Atlantic to the Pacific ocean.

2. 5,000 miles is the greatest length of South America.

3. 3,000 miles is the greatest width of South America.

Compare the length and width of South America with the length and width of North America. P. 68, nos. 2 and 3.

4. One-seventh. South America contains about one-seventh of the land mass of the globe. (About 6,850,000 sq. mi.)

5. 12° and 56° . South America lies between 12° north latitude, and 56° south; hence it extends through $(12^{\circ} + 56^{\circ})$ 68° of latitude.

6. 35° and 82° . South America lies between 35° and 82° west longitude; hence it extends through $(82^{\circ} - 35^{\circ})$ 47° of longitude.

7. 20° . The parallel of 20° south crosses central South America, southern Africa, and northern Australia.

What is the latitude of central North America? P. 68, no. 7.

8. The equator is the great circle midway between the poles. It crosses the northern part of South America, central Africa, and the islands Sumatra and Borneo.

9. The tropic of capricorn is one of the four important small circle. It is $23\frac{1}{2}^{\circ}$ south of the equator and crosses about the central part of South America, southern Africa, and central Australia,

Physical South America.

Bounding Waters. Winds.

10. Caribbean sea, p. 29, no. 112.

11. Atlantic ocean, p. 27, no. 92.

12. Antarctic ocean, p. 27, no. 94.

13. Pacific ocean, p. 26, no. 91.

14. Peru current, p. 29, no. 109, b.

15. Equatorial current, p. 28, no. 108, a.

16. Brazilian current, is a southern branch of the equatorial current washing a part of the eastern shore of South America.

17. Trade winds, p. 41, no. 214.

18. a. Calms of Capricorn, p. 40, no. 212, c.

b. Equatorial calms, p. 40, no. 212, a.

19. Prevailing Westerly winds, p. 41, no. 216.

*From the Isthmus of Panama by way of the Atlantic and Pacific oceans
to the Isthmus of Panama.*

Gulfs, Bays, and Straits.

Define each.

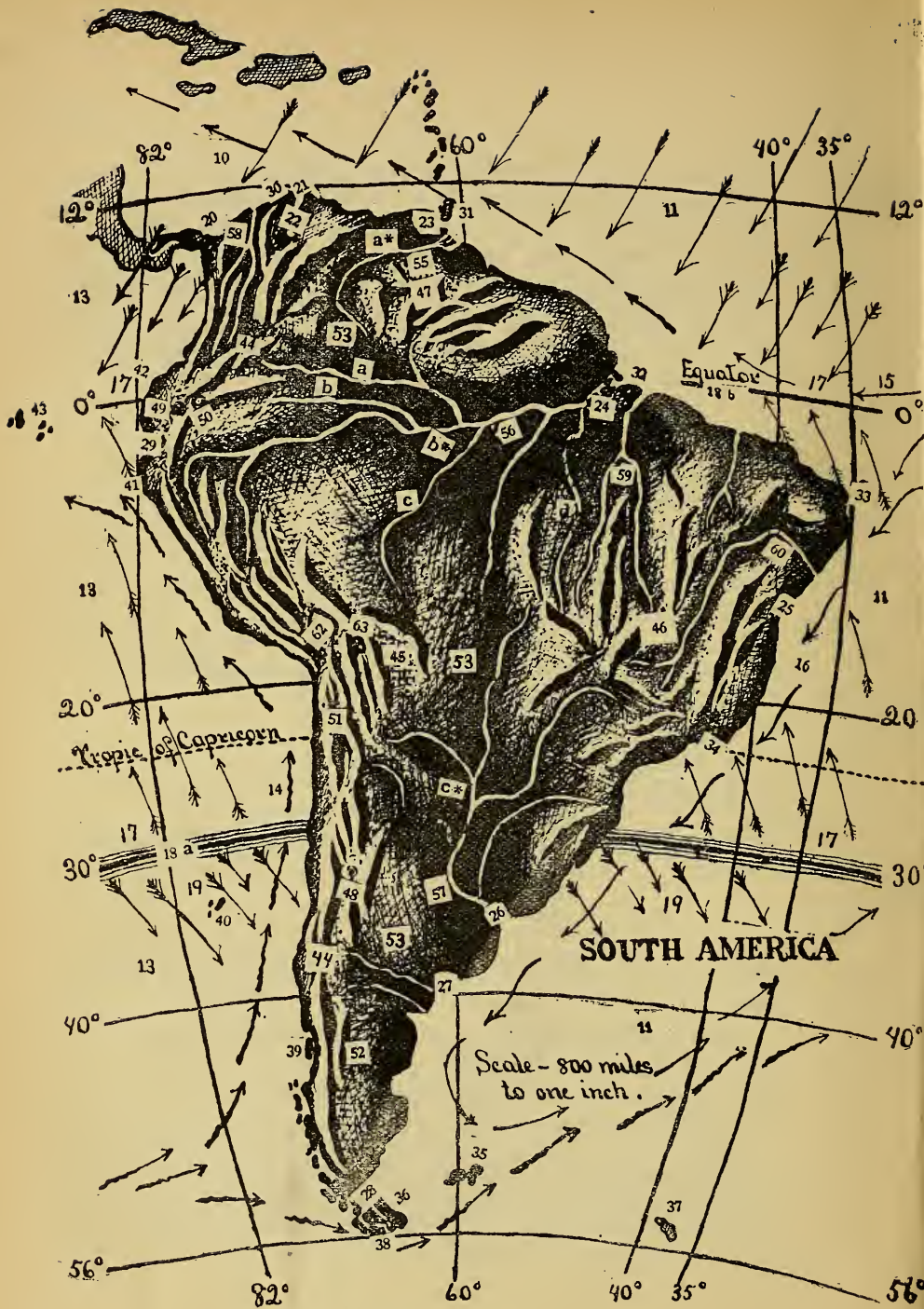
20. Darien is a gulf; it is an arm of the Caribbean sea, and indents Colombia and Panama.

21. Venezuela is a gulf; it is an arm of the Caribbean sea, and indents Venezuela and Colombia.

22. Lake Maracaibo, the largest lake of South America, is really a deep gulf; it indents northern Venezuela.

The early Spaniards, while exploring Lake Maracaibo, observed that the natives had built their houses on piles along the shore, and hence called the surrounding country Venezuela, a word meaning "little Venice."

23. Paria is a gulf; it is an arm of the Atlantic and indents the northern coast of Venezuela.





24. The mouths of the Amazon and Tocantins rivers form an estuary on the northern coast of Brazil, in which is located Marajo island.

25. All Saints is a bay; it is an arm of the Atlantic ocean, indents the eastern coast of Brazil, and forms one of the few important harbors of the continent.

26. The Rio de la Plata forms the estuary of the Parana and Uruguay rivers; it is situated between Argentina and Uruguay.

On account of the great amount of silt deposited here by the rivers, the harbor is naturally shallow but has been deepened by artificial means and is now the most important harbor of South America.

27. Blanca is a bay; it indents the eastern coast of Argentina, forming a deep but narrow harbor.

28. Magellan is a strait; it connects the Atlantic and Pacific oceans, and separates the island Terra del Fuego from the mainland.

The Strait of Magellan was discovered by Ferdinand Magellan in 1520, when he circumnavigated the globe.

29. Guayaquil is a gulf; it is an arm of the Pacific indenting the western coast of Ecuador.

From the Isthmus of Panama by the way of the Atlantic and Pacific oceans to the Isthmus of Panama.

Capes and Islands.

30. Point Gallinas, is the most northern cape of South America, in Colombia, on the Caribbean sea.

31. Trinidad is an island off the northeastern coast of Colombia, at the mouth of the Orinoco river, belonging to Great Britain. It is celebrated for its pitch lake from which much of the asphalt used for paving in the United States is obtained.

It is one of the West India islands. To which of the three groups does it belong? P. 74, no. 73.

32. Marajo is a large island, in the mouth of the Amazon, belonging to Great Britain. It has rich pasture lands.

33. St. Roque is the most eastern cape of South America, in Brazil, on the Atlantic ocean.

34. Frio is a cape, southeastern Brazil, on the Atlantic ocean.

35. The Falkland islands are two small windswept islands, east of Magellan strait, belonging to Great Britain. They furnish good pasturage for cattle and sheep, and harbors for whaling ships.

36. Terra del Fuego (land of fire) is an island about the size of the state of Ohio, at the extremity of South America. It belongs partly to Argentina and partly to Chile. The rich pasture lands make sheep-raising the principal industry.

37. South Georgia is an island east of Terra del Fuego in the Atlantic ocean belonging to Great Britain.

38. Horn is the most southern coast of South America, Chile. It marks the point for the meridian boundary between the Atlantic and Pacific oceans.

39. Chiloe is an island off the coast of Chile, belonging to Chile.

40. Juan Fernandez are islands west of South America, in the Pacific ocean. They belong to Chile.

41. Parina is the most western cape of South America, Peru, on the Pacific ocean.

42. San Francisco is a cape of western Ecuador, on the Pacific.

43. Galapagos, or Turtle islands, are a group of islands west of Ecuador, on the equator, belonging to Ecuador. They are noted for the gigantic tortoises or turtles found there.

Relief.

44. The Andes form the continental divide of South America. They extend like a great wall along the western coast, from the Caribbean sea to Cape Horn, forming the longest unbroken mountain range in the world. In the north this range spreads out in three chains forming the valleys of the Magdalena and of the streams flowing into Lake Maracaibo. As they near the equator, they increase in height and narrow to a single high range. Farther south they spread out in two lofty ranges and then again converge till they end abruptly in cliffs, thousands of feet high at Cape Horn.

In the Andes are lofty plateaus on which are many peaks higher than the highest peak of North America. Thirty or forty active volcanoes occur in the Andes, and earthquakes are frequent, some

regions being almost constantly shaken.

45. The Plateau of Bolivia is the loftiest plateau, located in the widest part of the Andes. It is chiefly in Bolivia and corresponds with the Great Basin of North America, having salt and alkaline lakes in the south.

46. The Brazilian Highland is the triangular-shaped plateau which occupies the eastern part of South America. It extends from the La Plata northward nearly to the Amazon, and corresponds, in location and height, with the Appalachian highland of North America.

47. The Guiana Highland is a low, much worn plateau, trending nearly east and west between the Orinoco and Amazon rivers. It corresponds with the Laurentian plateau of North America.

48. Aconcagua, in the southern Andes near the southern boundary of Argentina, is the highest mountain peak, not only of South America, but of the Western Continent. It is over four and one-fourth miles high.

49. Chimborazo is a high peak of the northern Andes, in Ecuador.

50. Cotopaxi, in the northern Andes, is the most noted volcano of the Andes. It has had many remarkable eruptions.

51. Atacama is a desert in the northern part of Chile on the western slope of the Andes. The southeastern and northeastern trade winds (north of 30° north latitude) coming from the sea, deposit their moisture as rain or snow on the eastern slope of the mountains, leaving the opposite side rainless; consequently, the desert region is on the western slope.

By way of what rivers does the rain, deposited on the eastern slopes of the Andes, return to the sea?

52. The desert region of Patagonia is located on the eastern slope of the Andes in southern Argentina. The prevailing westerly winds (south of latitude 30°) deposit their moisture on the western slope of the Andes, leaving the opposite eastern slope a desert region.

Patagonia is the southern part of Argentina. Its inhabitants are remarkable for their height, many of them being seven feet high.

If the Andes mountains were on the east coast instead of the west, northern South America would be a desert and the southern part a fertile region. Explain.

53. The Great Central Plain surrounds the Guiana plateau and extends southward, east of the Andes, to the island Terra del Fuego. It consists of the valleys of the Orinoco, the Amazon, and the La Plata rivers, and is divided by low elevations into:

a*. The llanos are the treeless plains of the Orinoco river basin.

They are covered with luxuriant grass in the rainy season and are almost a desert in the dry season.

b*. The silvas are the densely wooded plains of the Amazon river basin.

They are in the region of heavy and almost daily showers.

The silvas have an immense variety of trees laced together by huge vines, and the branches are laden with air plants. The rubber trees of the silvas supply most of the market of the world. The cinchona trees furnish Peruvian bark from which quinine is made. Rich cabinet woods abound. Vanilla, cocoa, and various medicinal plants are obtained from these forests.

c*. The pampas are the great plains of coarse grass in the Parana and Plata river basin.

The coarse grass with which they are covered make them vast herding places for cattle, horses, and sheep. They are treeless, and in some places, barren.

In the New World the mountains are situated on the margins of the continents and the great plains in the interior. In the Old World the mountains are in the interior and the plains along the margins. Determine the truthfulness of this statement as to each continent.

Drainage.

54. The great slope of the continent extends from the Andes to the Atlantic and is drained chiefly by three great river systems: the Orinoco, the Amazon, and the Plata.

55. Orinoco (coiled serpent) is a river of northern South America. At the mouth of this river, Columbus discovered the mainland of the continent 1498. It follows a northeastern course through grassy but treeless plains and empties its sluggish waters, through numerous mouths, into the Atlantic ocean, forming a delta larger than the state of New Jersey.

What name is given the grassy plains of the Orinoco? P 171, no. 53 a*.

56. The Amazon, the "King of Rivers", is the largest and one of the longest rivers in the world. It rises in Peru among the Andes and flows eastward into the Atlantic ocean at the equator. Its course is along the equator through a rainy region. This river drains more than one-third of the surface of South America.

It has numerous tributaries, the most important of which are:

a. The Rio Negro is a northern tributary of the Amazon, chiefly in Brazil. It is connected with the Orinoco by the Cassiquiare.

An Indian may pass from the Amazon to the Orinoco in his canoe.

b. The Yapura is a northern tributary of the Amazon, draining Colombia and Brazil.

c. The Madeira is a southern tributary of the Amazon, draining Brazil and Bolivia.

d. The Xingu is a southern tributary of the Amazon in Brazil.

The Amazon with its numerous tributaries, furnishes about 50,000 miles of navigable waterway. It is navigable for ocean steamers as far as the Rio Negro.

The name Amazon is derived from an Indian word meaning "boat destroyer", from the destructive tidal waves at its mouth. In its mouth are many islands, Marajo island being the largest. P. 168, no. 32.

The destructive tidal waves of the Amazon carry the sediment, brought down by the river, out into the ocean and prevent its forming a delta. The West Indies keeps out the tidal waves from the Gulf of Mexico. Hence the sediment is not taken away from the mouth of the Mississippi, but deposited as flood plains or a delta at the mouth of the river.

Compared with the Mississippi-Missouri, the Amazon, though not as long nor commercially as important, drains a larger area, has a heavier rainfall, carries a greater volume of water, and has more and larger tributaries than the Mississippi. It has a large estuary mouth while the Mississippi has a large delta.

57. The Rio Plata is a southeastern river system of South America, formed by the union of the Parana and the Uruguay rivers. It drains an area one half as large as that of the United States. This system is important for its commerce because it flows through the most productive region of the continent.

What are the plains drained by the Plata called? P. 171, no. 53 c*.

Account for the estuary forming the Rio Plata at the mouth of the Parana and Uruguay, and the delta at the mouth of the Orinoco.

58. The Magdalena, the only large river on the western side of the Andes, rises in the Andes and flows in a general northern course into the Caribbean sea. It is a great commercial route far into the mountains of Colombia.

59. The Tocantins is a river rising in southwestern Brazil, taking a northern course through the silvas of Brazil, and terminating in a large estuary mouth, called the Para river.

60. The San Francisco is a large river of eastern Brazil. Taking a general northern course, it drains a part of the Brazilian plateau

and finally flows in a northeastern direction into the Atlantic ocean.

61. Maracaibo, p. 175, no, 76.

62. Lake Titicaca is the loftiest large body of water in the New World, and also the highest navigated water in the world. It is located on the high plateau of Bolivia, partly in Bolivia and partly in Peru. A railroad, three hundred miles long, connects Puno on Lake Titicaca with Arequipa, the chief city of Peru, on the Pacific.

A steamer navigating Lake Titicaca was made at Glasgow, Scotland: trace the steamer from Glasgow to Lake Titicaca. How do you think the steamer was transported, in parts, or as a whole? The coal used by the engineer comes from Australia: trace this coal from Australia to Lake Titicaca.

63. Lake Aullagas is southeast of Lake Titicaca in Bolivia. It is fed by a river forming the outlet of Lake Titicaca. This lake has no outlet and its waters are consequently salt.

Political South America.

From the Republic of Colombia by Sea to the Republic of Colombia.

64. Colombia is a northwestern republic. It is bounded on the north, by the Caribbean sea; on the east, by Venezuela and Brazil; on the south, by Ecuador and Peru; on the west, by the Pacific ocean and Panama. Bogota is the capital and metropolis.

65. Venezuela is a northern republic. It is bounded on the north, by the Caribbean sea and the Atlantic ocean; on the east, by British Guiana; on the south, by Brazil and Colombia; on the west, by Colombia. Caracas, on the Caribbean sea, is the capital and metropolis.

66. Guiana is a northern country comprising British, Dutch, and French Guiana. It is bounded on the north, by the Atlantic ocean; on the east, by Brazil and the Atlantic ocean; on the south, by Brazil; on the west, by Brazil and Venezuela. Georgetown, on the Atlantic ocean, is the capital of British Guiana. Cayenne, on the Atlantic ocean, is the capital of French Guiana. Paramaribo, on the Atlantic ocean is the capital of Dutch Guiana.

67. Brazil is an eastern republic comprising nearly one half of the area of South America. It is bounded on the north, by Venezuela, the Guianas, and the Atlantic ocean; on the east, by the Atlantic

ocean; on the south, by Uruguay; on the west, by Argentina, Paraguay, Bolivia, Peru, and Colombia. Rio Janeiro, or Rio, on the Atlantic, is the capital and metropolis.

Brazil is the largest and most important country of South America.

68. Uruguay, a southeastern republic, is bounded on the north, by Brazil; on the east, by the Atlantic ocean; on the south, by the Plata river; on the west, by Argentina. Montevideo, on the Plata river, is the capital and metropolis.

69. Argentina is a southern republic next to Brazil in area and importance and is bounded on the north, by Bolivia and Paraguay; on the east, by Brazil, Uruguay, and the Atlantic ocean; on the south, by Chile and the Atlantic ocean; on the west, by Chile. Buenos Ayres, on the Plata is the capital of Argentina and the metropolis of South America.

70. Chile is a southwestern republic nearly three thousand miles long but scarcely one hundred miles wide and is bounded on the north, by Peru; on the east, by Bolivia and Argentina; on the south, by the Pacific ocean, (p. 26, no. 91, first sentence); on the west, by the Pacific ocean, Santiago is the capital and metropolis; it is connected with the seaport, Valparaiso, by railway.

Chile is the most enterprising republic of South America.

Valparaiso is the chief seaport of South America.

71. Peru is a northwestern republic, famed for the wealth of its mines. It is bounded on the north by Ecuador and Colombia; on the east, by Bolivia and Brazil; on the south, by Chile and the Pacific ocean; on the west, by the Pacific ocean. Lima, on the Pacific is the capital and metropolis.

72. Ecuador, meaning equator, is a northwestern republic, noted for its remarkable group of volcanoes. It is bounded on the north and east, by Colombia; on the south, by Peru; on the west, by the Pacific ocean. Quito is the capital and metropolis.

Inland Countries.

73. Paraguay is a south central republic, located between the Parana and Paraguay rivers. It is bounded on the north, by Bolivia and Brazil; on the east, by Brazil and Argentina; on the south and west, by Argentina. Asuncion on the Paraguay river, is the capital and metropolis.

74. Bolivia is a west central republic. It is bounded on the north and east, by Brazil; on the south, by Paraguay and Argentina, on the west, by Chile and Peru. Sucre is the capital, though the government usually meets at La Paz, the metropolis of Bolivia.

Seaports — Exports — Imports.

From Barranquilla, Colombia, by Sea to Guayaquil, Ecuador.

The goods from these ports are exchanged largely for goods from the ports of Europe, (especially England), and the United States.

75. Barranquilla is located in northern Colombia, on the Caribbean sea at the mouth of the Magdalena river. It exports gums, coffee, cocoanuts, and gold. It imports flour, salt, and petroleum.

76. Maracaibo and La Guaira are located in northern Venezuela, on the Caribbean sea. They export coffee, cacao, hides. They import textiles, hardware, and provisions.

77. Georgetown, British Guiana; Paramaribo, Dutch Guiana; Cayenne, French Guiana are located on the Atlantic ocean. They export sugar. They import textiles, hardware, and provisions.

The Guianas are not thickly settled and the value of their trade is not very great.

78. Para, in northern Brazil on the Para river; Pernambuco, in eastern Brazil on the Atlantic; Bahia, in eastern Brazil on the Atlantic; Rio Janeiro, in southern Brazil on the Atlantic; and Santos, the port of San Paulo, in southern Brazil on the Atlantic are leading seaports of Brazil. They export coffee, rubber, or caoutchouc, tobacco, cacao, and drugs. They import foodstuffs, cottons, coal, and petroleum.

Para is the greatest rubber shipping port in the world. For what purposes is rubber used? During one year the school children of New York alone used more than five tons of rubber erasers.

Santos is the largest coffee market in the world. It ships most of its coffee to Europe. It is the port of San Paulo which is situated in the heart of the coffee district.

Rio Janeiro, ranks next to Santos as a coffee market and is the second largest city of South America. It ships most of its coffee to the United States.

Bahia is the second largest city of Brazil. It was for many years one of the chief centers for the slave trade of Brazil. It was one of the ports nearest Africa, and the negroes could be kidnapped and carried across the Atlantic to this port. A great many of the slaves who were brought to North America came to Bahia first.

Pernambuco is in the center of a sugar district.

79. Montevideo is in southern Uruguay, on an excellent harbor, on the left bank of the Plata. It exports meat, hides, and grain. It imports food, machinery, and textiles.

80. Buenos Ayres, the metropolis of South America, is in eastern Argentina on the right bank of the Plata. It exports animal products and wheat. It imports textiles and agricultural implements.

The largest refrigerator plant for meat in the world is at Buenos Ayres. Hundred thousands of carcasses (dead bodies) of beef and millions of carcasses of sheep are frozen and exported annually.

81. Valparaiso, the port of Santiago, in western Chile, on the Pacific; and Iquique, in northern Chile, on the Pacific are the leading seaports of Chile. They export nitrate, copper, silver, iodine, and wheat. They import textiles, petroleum, iron, and steel goods, and lumber and farming tools. These ports trade chiefly with England.

Nitrate is used in the arts, as a fertilizer, and in the manufacture of explosives.

Punta Arenas, (sandy point) in Chile, midway on the strait of Magellan, is a coaling station for all steamers crossing the Atlantic between Australia and Europe, and those going to and from the west and east coasts of South America. Sailing vessels, however, advancing by the aid of the wind, prefer to sail about stormy Cape Horn. Why is it easier to sail around Cape Horn to the east than to the west? About Cape Horn fierce winds blow all the year round. The extreme southern end of South America may be called the very home of the winds.

82. Callao, the port of Lima, is in western Peru on the Atlantic ocean. It exports silver ore, sugar, cotton, coffee, guano, and alpaca wool. It imports machinery, lumber, flour, cars, and petroleum.

Guano is a fertilizer or manure composed of decayed animal and vegetable matter.

83. Guayaquil is in western Ecuador on the Pacific. It exports cacao, coffee, vegetable ivory, gold, panama hats, rubber, and hides. The imports are cotton and woollen goods, machinery, flour, lumber, and petroleum.

Vegetable ivory is the product of a species of palm tree in the form of several nuts in a ball. These nuts, somewhat like a chestnut, but about five times as large, are manufactured, especially in New York, into buttons, combs, etc.

Which countries have no seaport? Why?

SOUTH AMERICA.

Continuation and Review.

Mathematical.

For answers to questions see "What and Where".

84. Locate South America.
85. What is its greatest length? Greatest width? Compare with North America.
86. What part of the land mass of the globe does it comprise?
87. What are the latitude boundaries?
88. What are the longitude boundaries?
What is to be noted regarding the parallel of 20° ?
89. What great circle crosses South America? Where does it cross? What other continents, and what parts of these continents, are crossed by the equator?
90. What important small circle crosses South America? Where does it cross? What other continents and what parts of these continents, are crossed by the tropic of capricorn?

Physical.

Boundaries.

91. The natural boundaries of South America are:
 - a. On the north, the Caribbean sea and the Atlantic ocean;
 - b. on the east, the Atlantic ocean;
 - c. on the south, the Atlantic ocean and the Pacific ocean;
 - d. on the west, the Pacific ocean.
92. Its shape is triangular, tapering to a point toward the south.

Coast Forms of Land and Water.

93. Trace the gulfs, bays, and straits, from Panama by way of the Caribbean sea, the Atlantic and the Pacific oceans, to Panama.
94. Trace the capes and islands from Panama by way of the Caribbean sea, the Atlantic and Pacific oceans, to Panama.

Relief.

95. Name and describe the continental divide of South America.
96. Describe the plateau of Bolivia.
97. Describe the Guiana highland.

98. Name and locate three volcanoes.
 99. Name and describe the Great Central plain.
 100. Discuss the position of the mountains and plains in the New World compared with the position of those in the Old World.

Drainage.

101. Describe the great slope of South America.
 102. Describe the Orinoco river. The Amazon. The Rio Plata.
 103. Describe the Magdalena river. The Tocantins. The San Francisco.
 104. Name, locate, and describe, three lakes of South America.

Climate.

105. In what zone is South America?
 106. a. The climate of the lowlands in the torrid zone is hot; in the interior of the lowland plains the heat is almost intolerable.
 b. The climate of the plateau region varies according to the height above the sea-level, from a spring climate to a cooler, a temperate, and finally to a climate of perpetual snow. P. 42, no. 229 b.
 c. The climate of the regions south of the tropic of capricorn is temperate. The extreme southern part of the continent is very cold.
 107. a. In the torrid zone the winds are the northeast and the southeast trades. How do they affect the rainfall of the eastern slopes of the Andes? Of the western Andes? P. 170, no. 51.
 b. In the southern part the winds are the prevailing westerlies. How do they affect the rainfall of the western slope of the Andes? Of the eastern slope of the Andes? P. 170, no. 52.

Vegetation.

108. The plants of South America are of many kinds, and all the agricultural productions of the world may be successfully cultivated in South America. Explain.

The distribution of vegetation here, as in other continents, follows closely the distribution of rainfall.

109. a. What can you say of the silvas? P. 171, no. 53, b.
 b. On the southwest Pacific coast are great forests of cedar, oak, pine, laurel, and beech.
 110. Locate and describe two areas of grassy land.

111. Locate and describe two desert regions.

112. See seaports, exports, and imports, p. 175, nos. 75—83, and show on an outline map of South America where these export products are produced.

Animals.

113. The animals of South America are very unlike those of any other continent, and no other continent is so rich in animal life.

Bird and insect life is remarkable for variety and brilliancy and the reptiles are large and numerous.

Reptiles are animals that creep; such as, snakes and lizards.

114. Animals of the tropical lowlands:

1. The fierce, cat-like jaguar is the largest American flesh-eating animal.

It is so strong that it can carry off a horse with ease.

2. The cat-like puma, called also the American panther, preys on cattle, sheep, and other animals.

It is found throughout the region of the Andes.

3. The tapir resembles a pig, but is much larger and has a short proboscis.

The tapir of South America is black, that of Europe, partly white or light colored.

4. Many kinds of long-tailed monkeys inhabit the forests.

5. The sloth, so named from its sluggish movements on the ground, hangs from the branches of the trees with its back downward, and feeds on foliage.

6. The whale-like manatee and the lizard-like reptile, called alligator, are found in the rivers.

7. The boa-constrictor attains a length of thirty feet. It kills its victim by winding itself around it and crushing it.

8. The peccary is a species of wild hog very savage in its nature.

9. The armadillo, so called from the horny scales which cover its body like with an armor, is a burrowing animal.

10. The ant-eater feeds on insects conveyed to its mouth by its long, flexible tongue.

11. The flamingo is a stork-like, web-footed bird, with a small body, long neck, long legs, and pink or red plumage.

12. The parrot is a bird noted for its brilliant plumage and its

ability to imitate the human voice.

13. The iguana, a lizard-like animal from two to five feet long, is highly prized as food.

115. The animals of the pampas:

1. The deer is hunted for its flesh and skin.

2. The guanaco, an animal of Patagonia, is valued for its fine silky wool and its flesh.

3. The ostrich-like rhea is hunted for its feathers which are used to make feather dusters and feather rugs.

116. The animals of the Andes are:

1. The llama, in the central Andes, is noted for its fine, silky wool and it is used as a beast of burden.

2. The alpaca, in the southern Andes, and the vicuna are noted for their fine silky wool, and are domesticated.

3. The chinchilla, in the cold Andes, is a squirrel-like animal, valued for its delicate, gray fur, called chinchilla.

4. The condor, or vulture, is a very large bird of prey living in the high Andes, from which it flies many miles in search of food.

117. Select from the wild animals of South America those valued for their wool. Those valued for their flesh.

118. The domestic and most useful animals are the horse, sheep, and cattle, introduced from the Old World.

119. Thousands of cattle and sheep are pastured on the pampas.

Sketch a map of South America and show where all these animals are found.

Minerals.

120. South America is one of the richest mineral regions of the globe.

121. a. Gold, silver, and copper are found in the Andes and in Brazil.

b. Coal and iron are widely distributed.

c. Nitrate of soda is one of the most important minerals and is obtained from the dry, west coast, northern Chile and, Peru.

d. Diamonds are found in Brazil, but are neither so plentiful nor so valuable as they once were because of the discovery of richer deposits in Kimberley, South Africa.

122. Emeralds are found in the northern Andes.

On an outline map of South America show where these minerals are found.

Political.

History—Education—Religion.

123. South America was discovered by Columbus, who landed at the mouth of the Orinoco river in 1498. By whom was it named? P. 87, no. 179.

The vast empire of Peru was conquered by Pizarro, 1532, and eventually the whole of South America came under the Spanish rule, except Brazil, which was discovered by Portugal, 1501, under Americus Vesputius

The "gold working" Incas were the native Indians, found in Peru by the Spaniards. The Incas were partly civilized. They wove coarse cloth, made pottery, and built excellent roads. Cuzco was the capital of the Inca empire and was surrounded by thick walls of stone. Within was a magnificent "Temple of the Sun." On an island in Lake Titicaca was another temple almost as magnificent. After a savage war, 1533, the Spaniards, led by Pizarro, conquered the Incas, so that little by little their great empire melted away. The wonderful ruins of the cities of the Incas remain, and descendants of the Incas still inhabit this region.

In 1810 the colonies revolted and by 1822, all of them were independent republics.

Brazil became independent in 1822, but remained an empire till 1889.

124. Name in order the political divisions of South America with boundaries, capital, and metropolis of each. P. 173, nos. 64—74.

From the highlands of Colombia are obtained gold, silver, and the purest emeralds.

Venezuela is noted for its extensive salt deposits and for its wonderfully rich and varied flora.

The Guianas are the only portions of South America now dependent on any European power. The French division is used as a penal settlement. Cayenne, the capital, has given its name to the red pepper which grows there.

Brazil is the largest and most important republic and ranks foremost in the world in the coffee and the rubber trade.

Uruguay is the smallest of the South American republics, but one of the most progressive.

Argentina is next to Brazil in size and importance. It has more miles of railroad than any other South American republic, and next to Australia is the greatest wool-producing country in the world. It is next to Chile in educational advantage.

Chile is one of the most enterprising republics and has good schools and good roads and railroads connecting the larger towns.

Peru has been famed from the earliest times for the almost fabulous wealth of its mines.

Ecuador is one of the least important of the South American countries. It produces more cocoa than any other South American republic. Wheat and po-

tatoes are raised 1000 feet above the level of the sea.

Bolivia produces the finest quality of rubber.

Paraguay is the second smallest and least important republic.

125. Name and locate in order the seaports of South America with the principal exports and imports of each. Pp. 175-176, nos. 75-83.

126. Ten cities of South America in order of population are:

1. Buenos Ayres, Argentina, (1,000,000), p. 176, no. 80.
2. Rio Janeiro, Brazil, (750,000), p. 175, no. 78.
3. Santiago, Chile, (334,538), p. 175, no. 81.
4. Bahia, Brazil, (174,412), p. 176, no. 81.
5. Valparaiso, Chile, (143,769), p. 176, no. 81.

Valparaiso is almost directly south of New York city.

6. Montevideo, Uruguay, (139,866), p. 176, no. 79.

7. Rosario, Argentina, (131,000), three hundred miles from Buenos Ayres, situated on the Parana river in the center of the agricultural region, is a great wheat port. It can be reached by ocean steamers.

8. Lima, Peru, (130,000).

Lima, the capital and largest city of Peru, is situated about seven miles from the ocean. If it were not for a mountain stream, Lima would be a desert. Why? Lima is noted as the home of St. Rose of Lima, a Dominican nun and the first canonized saint of the New World. (1586)

The skeleton of the treacherous Pizarro is preserved in a glass coffin in the great Lima cathedral.

9. Bogota, Colombia, (120,000).

Bogota, although within four and one-half degrees of the equator has a climate of perpetual spring due to its altitude of nearly 9,000 feet.

10. Pernambuco, Brazil, (111,506), p. 175, no. 78.

127. Notes of interest:

1. Cartagena, a seaport of Colombia, on the Caribbean sea, is the scene of the heroic labors of the Jesuit Saint, Peter Claver who spent a long sacrificing life in bettering the life of the imported negro slaves. Died, 1604.

2. The Franciscan Saint, Francis of Solano, has earned by his labors and services the title of the "Apostle of Peru". He was also the first to preach the faith in Paraguay.

3. Pasco, Peru, over fourteen thousand feet above the sea, is the highest city in the world. It has a disagreeable, moist and cold climate.

Can you think of any reason for its location at such an altitude and in such a climate?

4. Diamantina, in southwestern, and Diamantino, in central Brazil, are named from the diamond mines near them.

5. Manioc is a sort of flour made from the root of the Cassava plant from which is prepared our tapioca of commerce.

Manioc is the principal food of the people of South America.

6. Rubber. The milky sap of the India-rubber tree is exposed to a smouldering fire for a few hours. It soon thickens and forms the rubber of commerce. An American, named Charles Goodyear discovered, in 1842, a way of hardening or vulcanizing rubber by melting sulphur with it, so that it could be worked into any form desired.

7. Paraguay tea, or mate, is the dried leaf of a kind of holly. It is used throughout South America instead of ordinary tea.

8. The original home of the coffee tree was in Southern Arabia, where Mocha, the most expensive variety, is still grown. A good coffee tree produces three or four pounds of coffee beans a year and will bear fruit for thirty years and sometimes more.

Coffee grows only in the tropics and thrives best on well-watered mountain sides.

9. The cacao bean is an almond-shaped seed obtained from the palms of an evergreen tree. Our cocoa, used for making a drink, is prepared from the seed-coats of this bean. Cocoa butter is a nutritious oil which is extracted, by heating, from the cacao bean. When ground with sugar and pressed into cakes, the product is called chocolate.

128. The population of South America is over thirty-eight million. (38,391,000).

129. The population is made up of:

a. Whites, principally descendants of the early Spanish and Portuguese settlers, who are the ruling people.

b. Indians, the aboriginal inhabitants. Some of them, dwelling in the interior and in the South, are still savage.

c. Negroes, the descendants of slaves imported from Africa, who form a large part of the population of Brazil.

d. Mestizas and Mulattoes.

A Mestiza is a person of mixed Spanish and Indian blood.

A Mulatto is a person of mixed white and negro blood.

130. Portuguese is the national language in Brazil. Elsewhere Spanish is usually spoken.

131. There have been frequent wars in all the republics and a few of the boundaries are even now unsettled; still it is a mistake to claim that South America is unprogressive. When comparing the higher classes in South America with the higher classes in Europe and the United States and the original natives of North America with the original natives of South America, – the South American civilization does not lose by the comparison.

It should be borne in mind that the original native Indian races were not driven beyond the frontier of civilization in South America as they were in the United States, but became and remain to this day an integral part of the population.

Goodschools are found in nearly all parts of South America. The universities of some of the political divisions rank with the best universities in the world.

132. The Roman Catholic Religion prevails. The present Catholic population of South America numbers about 37,000,000.

Here, as in North America, the missionaries were the pioneers, not only of the cross and religion, but also of civilization. They studied the languages of the natives, won their confidence, and rooted out cannibalism. They gathered the dwellers of the wilderness into settled habitation, taught them to read, write, and sing, to sow and reap.

Whilst the Indians were never inventive they were wonderful imitators.

Indians, whose forefathers had been cannibals, became skillful carpenters, masons, blacksmiths, turners, carvers, printers and gilders, watchmakers, and manufacturers of musical instruments; they cast bells, built organs, and constructed horse-mills and water-works for irrigation. They built plain, but roomy and comfortable houses, erected magnificent churches and public buildings which they adorned with their own statuary. Thus in the course of about a century and a half from the date of discovery, a free, happy, and innocent population of more than a million of Indians was instructed and civilized by zealous missionaries.

Commerce.

133. The coast of South America is very regular. Poor harbors, mountain ranges cut by swift streams and gorges, unhealthy coast plains, and interior marshes greatly hinder commerce.

134. Land routes of transportation are:

- a. Good wagon roads along the coast;
- b. mule paths in the interior;
- c. numerous lines of railroad that run from coast towns for short

The central part of the continent, excepting Argentina, is still a wilderness. A railroad is being built over the Andes between Buenos Ayres and Valparaiso and is nearly finished.

135. Which slope has the greatest commercial advantages? Why?

What products are brought down the Amazon? The Orinoco? The La Plata?

136. Our trade with South America is greatly hindered by the lack of regular and frequent steam-ship service. Fifty European vessels to one American vessel enter the ports of Rio Janeiro or Valparaiso.

We need the raw tropical products and foods of South America while she needs our manufactured goods. Many of our imports from South America go first to Europe and are then brought to us, and many of our exports to South America go first to Europe and then to South America. This is because there is better service between Europe and South America and between Europe and the United States.

137. In what language should labels and advertisements put on goods sent to South America be printed?

138. Make a list of our principal imports from South America with the names of the ports from which they are likely to be sent, and also the names of the United States ports at which they are likely to enter.

QUESTIONS FOR CLASS USE.

South America.

What and Where.

Mathematical. P. 164.

1. South America. 2. 5000 miles. 3000 miles. Compare with North America.
4. One-seventh. 5. 12° and 56° . 6. 35° and 82° . 7. 20° . What is the latitude of central South America? 8. The equator. 9. The tropic of capricorn,

Physical P. 165.

Bounding Waters. Winds.

10. Caribbean sea. 11. Atlantic ocean. 12. Antarctic ocean. 13. Pacific ocean.
14. Peru current. 15. Equatorial current. 16. Brazilian current. 17. Trade winds.
18. Calms of capricorn. 19. Prevailing westerly winds.

*From the Isthmus of Panama by Way of the Atlantic and Pacific Oceans
to the Isthmus of Panama.*

Gulfs, Bays, and Straits. P. 165.

20. Darien. 21. Venezuela. 22. Lake Maracaibo. 23. Paria. 24. Mouths of the Amazon and Tocantins. 25. All Saints. 26. Rio de la Plata. Which is the most

important harbor of South America? 27. Blanca. 28. Magellan. By whom was the strait of Magellan discovered? 29. Guayaquil.

*From the Isthmus of Panama by Way of the Atlantic and Pacific
Oceans to the Isthmus of Panama.*

Capes and Islands. Pp. 168—169.

30. Point Gallinas. 31. Trinidad. To which of the three West India island groups does it belong? 32. Marajo. 33. St. Roque. 34. Trio. 35. Falkland islands. 36. Terra del Fuego. 37. South Georgia. 38. Horn. 39. Chilce. 40. Juan Fernandez. 41. Parina. 42. San Francisco. 43. Galapagos.

Relief. P. 169.

44. Andes. 45. Plateau of Bolivia. 46. Brazilian Highland. 47. Guiana Highland. 48. Aconcagua. 49. Climborazo. 50. Cotopaxi. 51. Atocama. 52. The desert region of Patagonia. Locate Patagonia. Describe its inhabitants. What would be the effect on South America if the Andes mountains were on the east coast instead of on the west? Explain. 53. Great Central plain. Describe the llanos. The silvas. What useful articles of commerce are obtained from these forests? Describe the pampas. What important industry is carried on in that region? Speak briefly on the positions of the mountains and plains in the Old and New World. How do they differ? Examples.

Drainage. P. 171.

54. The Great Slope. 55. Orinoco. What name is given to the grassy plains of the Orinoco? 56. Amazon. Rio Negro. Yapura. Madeira. Xingu. From what word is the name Amazon derived? 57. Rio Plata. 58. Magdalena. 59. Tocantins. 60. San Francisco. 61. Maracaibo. 62. Lake Titicaca. 63. Lake Aullagas.

From the Republic of Colombia by Sea to the Republic of Colombia. P. 173.

64. Colombia. 65. Venezuela. 66. Guiana. 67. Brazil. 68. Uruguay. 69. Argentina. 70. Chile. 71. Peru. 72. Ecuador.

Inland Countries. P. 174.

73. Paraguay. 74. Bolivia.

Seaports — Exports — Imports. P. 175.

From Barranquilla, Colombia, by Sea to Guayaquil, Ecuador.

75. Barranquilla. 76. Maracaibo and La Guaira. 77. Georgetown, Paramaribo, Cayenne. 78. Para. Pernambuco. Bahia. Rio Janeiro. Santos. 79. Montevideo. 80. Buenos Ayres. 81. Valparaiso. 82. Callao. 83. Guayaquil.

South America. Continuation and Review. P. 177.

Mathematical.

84. Locate South America. What is the greatest length? Greatest width? Com-

pare with North America. What part of the land mass of the globe does it comprise? What are the latitude boundaries? What are the longitude boundaries? What is to be noted regarding the parallel of 20 degrees? What great circle crosses South America? Where does it cross? What other continents and what parts of these continents are crossed by the equator? What important small circle crosses South America? Where does it cross? What other continents? What parts of these continents are crossed by the tropic of capricorn?

Physical.

Boundaries.

Coast Forms of Land and Water. P. 177.

93. Trace the gulfs, bays, and straits from Panama by way of the Caribbean sea, the Atlantic and the Pacific oceans to Panama. 94. Trace the capes and islands from Panama by way of the Caribbean sea, the Atlantic and the Pacific oceans to Panama.

Relief. P. 177—178.

95. Name and describe the continental divide of South America. Describe the plateau of Bolivia. Describe the Guiana highland. Name and locate three noted volcanoes. Name and describe the Great Central plain. Discuss the position of the mountains and plains in the New World compared with the position of those in the Old World.

Drainage. P. 178.

101. Describe the great slope of South America. Describe the Orinoco river. The Amazon. The Rio Plata. Describe the Magdalena river. The Tocantins. The San Francisco. Name, locate, and describe three lakes of South America.

Climate. P. 178.

105. In what zone is South America? Describe the climate of the lowlands. The plateau region. The region south of the tropic of capricorn.

107. What winds blow over the torrid zone? How do they affect the rainfall of the eastern slopes of the Andes? Of the western Andes? What winds blow over the southern part? How do they affect the rainfall of the western slope of the Andes? Of the eastern slope?

Vegetation. P. 178.

108. What can be said of the plants of South America? What can be said of the silvas? Forest of Pacific coast? Locate and describe two areas of grassy land. Locate and describe two desert regions.

Animals. P. 179.

113. Compare the animals of South America with those of the other contin-

ents. Describe the animals of the tropical lowlands. Of the pampas. Of the Andes. Select from the wild animals of South America those valued for their wool. Those valued for their flesh. Name the domestic animals of South America. What industry is especially important on the pampas.

Minerals. P. 180—181.

120. What may be said of the mineral regions of South America? What minerals are found? Where? Tell about the gold-working Incas. Tell how the Spanish and Portuguese colonies became independent.

Political.

History—Education—Religion. P. 181.

123. Who discovered South America? Who conquered Peru?

124. Name in order the political divisions of South America with boundaries, capital, and metropolis of each. State an important fact about each of the following: Colombia. Venezuela, Guianas, Brazil, Uruguay, Argentina, Chile, Peru, Ecuador, Bolivia, Paraguay.

125. Name and locate in order the seaports of South America with the principal exports and imports of each.

126. Name ten cities of South America in order of population. What city is almost directly south of New York city? Why is Rosario noted? Lima? Bogota?

Notes of Interest. P. 182—183.

127. Why is Cartagena noted? What saint is called the apostle of Peru? Name the highest city in the world. Locate Diamantina and Diamantino. Why so called? From what is tapioca prepared? How is rubber prepared? What is Paraguay tea? Discuss the production of coffee. Of cacao.

128. What is the population of South America? What races inhabit South America? What is a Mestizo? A mulatto? What languages are spoken in South America? What can be said of the progress of South America? What is said of the original inhabitants? The schools? What religion prevails in South America? What is the Catholic population? Tell about the works accomplished by the early missionaries. The progress made by the Indians.

Commerce. P. 184—185.

133. Describe the coast of South America. What are the land routes of transportation? What slope has the greatest commercial advantages? Why? What products are brought down the Amazon? The Orinoco? The La Plata? What hinders trade between the United States and South America? In what language should labels and advertisements put on goods sent to South America, be printed?

138. Make a list of our principal imports from South America with the names of the ports from which they are likely to be sent and also the names of the United States ports at which they are likely to enter.

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Africa.

(The study of Africa is V. Grade work.)

Mountains on the east and west rearing high their lofty crests,
Great Sahara's waste so dry, lying 'neath a scorching sky:
Seldom here is seen the snow, seldom cooling breezes blow,
While the sun from burning throne shines and claims her as his own,
This land of Africa.

WHAT AND WHERE?

MATHEMATICAL.

1. **Africa**, the second in size of the great divisions of the globe, is nearly four times the size of the United States and lies in the Eastern Hemisphere, about one-half of its length being on either side of the equator. It is triangular in shape, having its vertex to the south. It is joined to Asia by the isthmus of Suez, which, however, is cut by the Suez canal. P. 58, no. 24, a. Its coast line is more regular than that of any other continent.

2. **5,000 miles** is the approximate length.

3. **5,000 miles** is the approximate width.

4. **One-fifth.** Africa contains about one-fifth of the land mass of the globe (11,500,000 sq. mi.).

5. **37° north and 35° south.** Africa lies between 37° north and 35° south latitude; hence it extends through (37° and 35°) 72° of latitude.

6. **18° west and 51° east.** Africa lies between 18° west and 51° east longitude; hence it extends through (51° and 18°) 69° of longitude.

7. **Equator.** The equator crosses central Africa, northern South America, and the islands of Borneo and Sumatra.

8. **The tropic of cancer** (23½° north of the equator) crosses northern Africa, southern North America, and southern Asia.

9. **The tropic of capricorn** (23½° south of the equator) crosses southern Africa, central South America, and central Australia.

PHYSICAL.

Bounding Waters. Winds.

10. **Mediterranean sea**—p. 228, no. 31.

11. **Red sea**—p. 190, no. 24.

12. **Indian ocean**—p. 27, no. 93.

13. **Atlantic ocean**—p. 27, no. 92.

Bound Africa.

14. **Monsoon Drift**—pp. 46, 47, no. 16.

15. **Mozambique Current**—pp. 46, 47, no. 19.

16. **Antarctic Current**—pp. 46, 47, no. 13.

17. **Benguela Current**—pp. 46, 47, no. 19.

18. **Guinea Current**—pp. 46, 47, no. 9.

From the Strait of Gibraltar to the Strait of Gibraltar.

Seas, Gulfs, Bays, and Straits.

19. **Strait of Gibraltar** connects the Mediterranean sea with the Atlantic ocean and separates Africa from Europe. P. 229, no. 41.

20. **Mediterranean**—p. 228, no. 31.

21. **The gulf of Gabes** is an arm of the Mediterranean sea, indenting northern Africa.

22. **The gulf of Sidra** is an arm of the Mediterranean sea, indenting northern Africa.

23. **Suez**—p. 228, no. 30.

24. **Red sea**, southwestern Asia, is partly enclosed by Asiatic Turkey and Africa.

25. **The strait of Babel Mandeb**, "Gate of Tears," connects the Red sea and the gulf of Aden, and separates Asia from Africa.

26. **The gulf of Aden** is an arm of the Arabian sea, between the

Arabian peninsula and Africa.

27. **The Mozambique channel** separates the island of Madagascar from the mainland of Africa.

28. **Delagoa bay** is an arm of the Indian ocean, indenting south-eastern Africa.

29. **The gulf of Guinea** is an arm of the Atlantic, indenting west-central Africa.

30. **The bight of Biafra** is an arm of the gulf of Guinea, indenting west-central Africa.

31. **The bight of Benin** is an arm of the gulf of Guinea, indenting west-central Africa.

From Cape Bon to Cape Bon.

Capes and Islands.

32. **Cape Bon** is the most northern point of Africa, on the Mediterranean sea.

33. **Suez** is an isthmus connecting Africa and Asia. P. 189, no. 1.

34. **Guardafui** is the most eastern cape of Africa, on the Indian ocean.

35. **Zanzibar**, an island off the eastern coast of Africa, is the chief market of the world for ivory and cloves. It belongs to Great Britain.

36. **Madagascar**, a long island east of southern Africa, in the Indian ocean, belongs to France. One of its chief exports is raffia.

Raffia is a palm fibre, derived from the cuticle of the leaves of an African palm, taken before they are fully expanded. The commercial product comes in the form of narrow ribbons of fibrous material. It is used for making and trimming hats, also in the manufacture of fancy baskets, etc.

37. **Cape Agulhas** is the most southern cape of Africa, on the Indian ocean.

38. **Cape of Good Hope** is a southern cape on the Atlantic.

It was discovered by the Portuguese navigator Diaz, 1486. Vasco de Gama, in 1497, sailed from Portugal around the cape of Good Hope across the Indian ocean to India. He was the discoverer of this water-route to India.

39. **St. Helena** is an island off the southwestern coast of Africa, in the Atlantic. It is a coaling station belonging to Great Britain. P. 18, no. 12, c.

It is known as the prison home and the scene of the death of Napoleon I., Emperor of France, who was banished to this island by the English after his defeat at Waterloo.

40. **Cape Verde** is the most western cape of Africa, on the Atlantic.

41. **Cape Verde islands**, a group of unimportant islands, are in the Atlantic ocean nearly opposite cape Verde.

42. **Blanco** is a western cape of Africa on the Atlantic.

43. **Canary islands** are a cluster of islands in the Atlantic ocean, sixty or seventy miles from the northwestern coast of Africa, belonging to Spain.

They were anciently called "Fortunate Islands," on account of their climate and fertility.

44. **The Madeira** are a group of islands off the northwestern coast of Africa, in the Atlantic, belonging to Portugal.

They produce much wine and fruit.

45. **The Azores** are a group of islands off the northwestern coast of Africa, in the Atlantic, belonging to Portugal.

They produce oranges and pineapples.

46. **Cape Spartel** is a northern cape on the strait of Gibraltar.

RELIEF.

47. **Africa** is a vast plateau, surrounded by a belt of low, marshy, malarious land, varying in width from a few miles to two hundred miles. It may be likened to a lengthy vegetable dish, the convex part of the dish representing the vast plateau region, and the low margin the belt of marshy lowland surrounding the plateau.

48. **The great African highland** occupies the southeastern half

of Africa, and extends as a plateau a mile high from the strait of Babel Mandeb to the Atlantic ocean. From this great highland plateau three rugged and narrow tongues of highland extend far to the northwest.

49. One of these tongues extends along the Red sea coast;

50. the second highland tongue extends through the center of the grand division; and

51. the third highland tongue extends in broken plateaus along the Atlantic coast.

52. The Atlas mountains are an isolated highland situated in the extreme northwest.

53. Mt. Kilimanjaro in the east, and

54. Mt. Kenia, north of it on the equator, are two extinct volcanoes nearly three and one-half miles high. They are the loftiest points in Africa.

55. Mt. Teneriffe, on one of the Canary islands, is a celebrated volcano about two and one-third miles high.

56. A vast, almost continuous lowland, with broad southward extensions on either side of the central highland tongue, occupies the northwestern half of the continent.

57. The deserts of Africa occupy nearly one-third of the entire area of Africa.

58. The Sahara, or Great Desert, is situated in the northern part of Africa. It is nearly two-thirds as large as the United States and is enclosed on the

(a) north, by the Atlas mountains and northern plateaus;

(b) east, by the mountains along the Red sea;

(c) south, by the Sudan;

(d) west, by the Atlantic ocean.

It is a desert from lack of water and not because of its sandy soil. It is a part of the great desert belt that extends from the western shores of Africa to the eastern limits of the desert of Gobi in Asia. It lies in the region of the north-

east trade winds, and these, coming from the dry plateau of Arabia, are rainless and hot.

59. **The Nubian desert**, an eastern division of the Sahara, is situated between the Nile and the Red sea.

60. **The Libyan desert**, an eastern division of the Sahara, is situated west of the Nile.

61. **The Kalahari desert** is located in southern Africa, near the tropic of capricorn, north of the Orange river. It is due to the influence of the calms of capricorn and the dry winds.

DRAINAGE.

62. **Africa** is the driest of the continents, still it has some of the largest rivers in the world, which have their sources in the regions of heavy rainfall and on the long slopes of the highlands.

For convenience in studying, we may divide the drainage areas into three great slopes—the Mediterranean slope, the Indian slope, and the Atlantic slope.

63. **The Nile**, a great historic river, rises south of the equator in lake Victoria Nyanza. It is made up of three rivers—the White Nile, the Blue Nile, and the Atbara river, and flows in a winding northern direction, emptying by two arms into the Mediterranean sea. It is 42,000 miles long. Compare with the Mississippi, p. 77, no. 107.

The great fertility of Egypt is due to the annual overflow of the Nile. The rising of the waters begins the latter part of June, or just about the time of the summer solstice. The first sign of the flood is a change in the appearance of the waters, which become red and turbid. About the middle of July they overflow the banks and spread themselves over the land till the country looks like a great inland sea, dotted here and there by villages and towns. The latter part of September the waters begin to subside. Thirty feet is about the average rise of the river. The annual inundation leaves a rich alluvial deposit which produces a most luxuriant vegetation.

THE NILE.

Rising high above sea level in the Mountains of the Moon,
Cradled in their mighty caverns, the fair Nile its way has hewn
Thro' the many mountain barriers, and thro' granite rocks beside,
Over terraces and rapids, on its courses in mad ride,

Down the cataracts now dashing, into foam its waves now lashing,
 Till at length it meets the plain, where it calmly smiles again;
 But it onward, northward, flows; scattering blessings as it goes,
 As it slowly glides along, murmuring low its happy song
 Till it finds at last its grave on blue Mediterranean's wave.

64. **The Zambezi river**, the most important on the eastern coast of Africa, and the fourth largest of the continent, rises in the southwestern plateau region and flows in an eastern direction, through a large delta, into the Indian ocean. It is 1,200 miles long.

65. **The Orange river**, southern Africa, is the most important southern river of the continent. It rises within one hundred miles of the Indian ocean and flows in a general western direction into the Atlantic ocean. It is about 1,300 miles long.

66. **The Kongo**, the second longest and the largest river of Africa, is formed by the junction of the Luapula and Lualaba rivers in about the same latitude as its mouth. It is connected with the great lake region of Africa by its head stream, and flows by a large bend, in a general western direction, crossing the equator twice, into the Atlantic ocean. It is about 3,000 miles long.

67. **The Niger**, the third largest river of the continent, rises in west-central Africa, and flows first in a northern and then in a southeastern direction and empties by a delta, one hundred miles long, into the gulf of Guinea. It is about 2,600 miles long.

Name in order of length the five most important rivers of Africa.

Navigation of the African rivers is frequently obstructed by cataracts and waterfalls. The Nile and the Niger are navigable for about seven hundred miles, but in the Kongo cataracts occur much nearer the mouth. The Zambezi and the Orange rivers have many falls and are not extensively navigable.

68. **The Victoria falls**, p. 35, no. 159, c.

The most important group of lakes in Africa is situated in the highland, near the equator, in the eastern part and in the great rain belt of the continent.

69. **Lake Victoria**, the source of the Nile, is next to lake Superior, the largest fresh water lake in the world.

70. **Lake Albert Edward**, on the equator, and

71. **Lake Albert Nyanza**, a little north of it, discharge their waters into the Nile river.

72. **Lake Tanganyika**, a long, narrow lake, has its outlet through the Nile river; also

73. **Lake Bangweolo**, which is the source of the Luapula river, the head tributary of the Kongo.

74. **Lake Nyassa** is a long, narrow lake; it discharges its waters into

75. **Lake Tchad**, in the north central part of Africa, near the border of the Sahara, is a shallow fresh water lake, and during the wet season is larger than lake Erie.

CLIMATE.

76. **Africa** is the hottest of the continents and the only one that extends across the torrid zone. It may be divided into four climatic belts:

(a) **The northern part**, excepting the region bordering on the Mediterranean, is hot and rainless. Why? P. 193, no. 58, note. It is subject to extremes of temperature—very hot in daytime and very cold at night.

Eggs may be baked in the sands of the Nubian desert. Egypt has a mild and delicious climate, noted for the clearness of the atmosphere. The dryness of the air preserves objects from decay and hastens evaporation. Travelers are obliged to oil their faces and hands to prevent them from cracking.

The climate of the region bordering on the Mediterranean is moderated by the breezes from over the sea.

(b) **Central Africa**, though it extends over the entire width of the torrid zone, is not so hot as it is north or south of this region, owing to the elevation and consequent heavy rainfall. The heavy rainfall is caused by the southeast trade winds; these come from the Indian ocean and are laden with moisture which is condensed above the snowy mountains of equatorial Africa, and falling as rain or snow, feeds the great rivers and lakes of Africa. P. 39, no. 202, b.

On the Guinea coast, on the lowlands, the climate is malarious

and intensely hot. This entire region has a very heavy rainfall, owing to the equatorial calms. P. 38, no. 202, a., also p. 40, no. 212, a.

(c) **Southern Africa** possesses a mild and genial climate, and a moderate rainfall, due to its latitude, elevation, and the southeast trade winds.

The rainless region of the Kalahari desert, near the tropic of capricorn, is due to the calms of capricorn and the dry winds. P. 40, no. 212, c.

ANIMALS.

77. **Africa** is noted for its great number and variety of strange and ferocious animals, as well as for its many birds of beautiful plumage.

(a) The large animals include the elephant, lion, leopard, rhinoceros, giraffe, zebra, hippopotamus and crocodile.

(b) Antelopes, deer-like animals of many species, herd on the grassy plains.

(c) **The fierce gorilla**, the chimpanzee, and many other kinds of monkeys, are at home in the tropical forests.

(d) **The camel** is the principal animal of northern Africa.

(e) **Vast herds of cattle and flocks of sheep** are raised in southern Africa.

(f) **The ostrich** roams over the deserts and open plains. Other birds are the Guinea fowls, beautiful sun-birds, and parrots.

(g) **Venomous snakes** abound in the south.

(h) **The locust** is the scourge of vegetation; and the tsetse, in southern Africa, is a venomous fly whose bite is fatal to cattle.

The elephant and the hippopotamus of Africa yield three-fourths of the ivory product of the world. From what three sources is ivory obtained? The animal ivory is obtained from the hippopotamus, elephant, and the narwhal, a sort of fish found in the northern waters.

78.

VEGETATION.

(a) **Northern Africa** yields grain, cotton, dates, almonds and olive-oil.

(b) **Rice** is the leading product of the Guinea coast.

(c) **The date palm** flourishes along the shores of the Mediterranean

and in the oases of the desert.

(d) **The famous baobab tree** is found in central Africa. It is noted for its great size and is one of the giants of the vegetable kingdom.

Its trunk is from twenty to thirty feet in diameter. Its fibre is used in making paper, cordage, etc. Millions of these trees are found south of the Kongo river, and many of them are said to be thousands of years old.

(e) **Dense forests** cover equatorial Africa.

(f) **Groves of teak, mangrove, ebony, and India-rubber** abound on the western coast.

(g) **Gum-arabic, myrrh, cotton, coffee, sugar-cane, and spices** are the products of eastern Africa.

MINERALS.

79. **Africa possesses great mineral wealth.**

(a) **Coal and iron** are found in considerable quantities.

(b) **The diamond mines, near Kimberley, in the northern part of Cape Colony and the gold mines near Johannesburg, in the Transvaal colony, are the richest in the world.**

Gold is also abundant in western Africa on the Guinea coast.

(c) **Copper, lead, and salt** are obtained in some places.

POLITICAL.

History and Religion.

80. **Africa differs so much from the other continents of the world, and so much concerning it is unknown that it is called the "Dark Continent."** Like Europe it was first settled by people from Asia. Northern Africa is noted in history as the seat of very ancient civilization which was fostered by the fertility of the lands bordering the Mediterranean sea and by the proximity of southern Europe.

Africa south of the Mediterranean states, first became known to Europeans about the time of the discovery of America.

Through trade, by sending out missionaries, and by conquest, Europeans gradually gained a foothold in Africa and extended their spheres of influence from the coast to the interior. Now each of the Great Powers is striving for the greatest share.

Dr. Livingstone, employed by the London Missionary society, and Henry Morton Stanley, sent by the "New York Herald" to learn of the fate of Livingstone, are two to the most noted of the African explorers.

81. **As regards religion**, a great proportion of the inhabitants are savages of the lowest type. Mohammedanism possesses a large number of adherents in northern Africa. Christianity prevails chiefly among the Copts (descendants of the ancient Egyptians), the Abyssinians, and the natives of Madagascar.

The Roman Catholic religion was first brought to Africa by St. Mark. It rapidly spread over northeastern and northern Africa, and derived great splendor from its doctors, anchorites, and confessors. It was represented by such men as Clement of Alexandria, Origen, Athanasius, and Cyril, and produced such doctors as Tertullian, Cyprian, Optatus, and Augustine.

At present, Catholic missionaries are zealously laboring in Africa endeavoring to evangelize the natives. Their work, begun and continuing amidst so many difficulties, has developed wonderfully in every direction and is attended with promising success.

It is encouraging for the Catholic to see the heroism with which the missionaries are toiling for the welfare and salvation of the Dark Continent.

PEOPLE.

82. **The population of Africa** is 158 million.

83. **The people of Africa** are all either of the white or of the black race.

(a) **North of the southern Sahara** the native people are of the white race and consist of Berbers, Arabs or Moors, and Egyptians or Copts.

(b) **The European whites** prevail in the coast regions.

(c) **Elsewhere** the people are blacks.

The very black negroes live in the center of the continent in a region called the Sudan which means "Land of the Blacks".

The light colored negroes live south of the equator.

The kafirs, a tall, muscular race, inhabit the coast region between Delagoa bay and Cape Colony.

The Bushmen, a race of dwarfs, inhabit the Kalahari desert and some northerly portions of Cape Colony. They are among the lowest savages of the world, but are remarkably acute in securing food and finding their way through the pathless forests. Their weapons are poisoned arrows.

The Pygmies, or Negritos, the smallest people in the world, live in the Kongo forests. They vary in height from thirty-three inches to about four and one-half feet.

GOVERNMENT.

84. **Three-fourths of Africa** is under the direct or indirect control of seven European states.

These nations, in order of extent of territory are France, Great Britain, Germany, Portugal, Spain, Turkey, and Italy.

85. **The part of Africa** not under the control of European nations comprises independent empires and kingdoms; held by unruly hordes, or by savage people, still in the tribal state.

POLITICAL DIVISIONS.

The Barbary States.

86. MOROCCO.

(1) **Position**—Morocco in the northwest is the largest of the Barbary states.

(2) **Government**—Independent empire ruled by a sultan.

(3) **Capitals**—Fez and Morocco.

(4) **City**—Tangiar.

(5) **Exports**—Grain, eggs, almonds, leather, and dates.

(6) **Imports**—Textiles, coffee, sugar, tea, and firearms.

87-88 ALGERIA AND TUNIS.

(1) **Position**—Algeria and Tunis, in northern Africa, are the most prosperous of the Barbary states.

(2) **Government**—They are French colonies.

(3) **Capitals**—Algeria, Algiers; Tunis, Tunis.

(4) **Exports**—Esparto grass, used in making paper, zinc ore, flax; tobacco, grain, wine, honey, wool, sponges, coral, and coal.

(5) **Imports**—Textiles, coal, coffee, tea, and various manufactures.

89.

TRIPOLI AND BARCA.

(1) **Position**—Tripoli and Barca, in the north, are mostly sterile.

(2) **Government**—Turkish dependency.

(3) **Capitals**—Tripoli, Tripoli; Barca, Bengazi.

(4) **Exports**—Wool, ivory, ostrich plumes.

(5) **Imports**—Textiles, coal, coffee, tea, various manufactures.

OTHER COUNTRIES OF AFRICA.

90.

EGYPT.

(1) **Position**—Egypt, in the northeast, occupies the lower part of the Nile valley. It is the most important country of Africa.

(2) **Government**—Nominally a Turkish province, but Great Britain controls its finances and foreign trade. The ruler is called Khedive, which means king.

(3) **Capital**—Cairo, on the Nile. It is the largest city of Africa.

(4) **Cities**—Cairo, Alexandria, Suez, Port Said.

(5) **Exports**—Raw cotton, grain, vegetables, sugar, tobacco.

(6) **Imports**—Textiles, lumber, and coal.

The valley of the Nile is in a rainless region. At certain seasons however, among the mountains of Abyssinia and equatorial Africa, the rain pours down in torrents. The Nile is swollen by this rainfall and overflows. P. 194, no. 63.

In olden times Egypt was the granary of the world, the home of learning and civilization.

(7) **The ruins of the temple** and pyramids on the left bank of the Nile, show engineering and architectural skill. They are

unrivalled for grandeur.

The Sphinx (watch-tower) was hewn out of solid rock. It has a human head on the body of a lion. The pyramid of Cheops covers an area of about thirteen acres. It is fifty-four feet in height.

91.

ABYSSINIA.

(1) **Position**—Abyssinia, in the east central part, occupies an extensive plateau region.

(2) **Government**—It is one of the oldest monarchies of the world and is governed by an emperor.

(3) **Capital**—Addis Abeba.

(4) **Exports**—Coffee, ivory, gold, and wax.

(5) **Imports**—Textiles, cutlery.

92.

THE SAHARA.

(1) **Position and Extent**—The Sahara, p. 193, nos. 58, 59, 60.

(2) Its population consists of widely spread nomadic Arabs, who are largely occupied in transporting the exports of the Sudan, to the Mediterranean cities, and bring in return, cutlery, cotton goods, and trinkets. By what means are these goods transported?

(3) **Exports**—Salt from the Sahara mines and brine pits, is the only important export.

The negroes of this region are the most intelligent and civilized of their race.

93.

THE SUDAN.

(1) **Position**—The Sudan, or "Land of the Blacks," occupies the region south of the Sahara, stretching nearly across the continent.

(2) **Government**—It comprises petty mixed breed kingdoms and various divisions under English and French rule.

(3) **Exports**—Gold dust, ivory, palm-oil, and ostrich feathers.

(4) **Imports**—Textiles, cutlery, and trinkets.

94.

KONGO STATE.

(1) **Position**—The Kongo State comprises a large portion of the basin of the Kongo. It extends from the Atlantic to lake Tanganyika.

(2) **Government**—It is under the protection of the king of Belgium.

(3) **Capital**—Boma.

(4) **Exports**—Rubber, palm-oil, coffee, ivory, and nuts.

(5) **Imports**—Textiles and cutlery.

95.

WESTERN COAST.

(1) **The western coast** of Africa consists of a lowland bordering on the Atlantic ocean and comprises:

(a) **English possessions**;

(b) **Liberia**, a small independent republic, established in 1847 as a refuge for freed negro slaves of America;

(c) **French possessions**;

(d) **German possessions**;

(e) **Portuguese possessions**, including the Azores, Cape Verde islands, and other groups;

(f) **Spanish possessions**, including the Canary islands.

The Canary islands are the native home of the little singing bird that bears the name.

(2) **Exports** —Coffee, rice, palm-oil, ivory, ebony, India-rubber, and other tropical products.

(3) **Imports** —Textiles, cutlery, hardware, firearms, liquors.

(4) **Monrovia** is the capital of Liberia.

96.

SOUTH AFRICA.

(1) **Position** —Southern Africa comprises chiefly British possessions which extend northward as far as the great lake region and the Kongo State. It is bounded on the west by the German and Portuguese possessions, and on the east by Portuguese and German possessions.

(2) **Cape Colony** includes the Kimberley diamond mines of southern Africa. Cape Town is the capital and largest city.

(3) **Orange River colony** is rich in gold and diamond mines.

(4) **The Transvaal colony** contains extensive gold deposits. Pretoria is the capital of the Transvaal colony and Johannesburg, which is now the largest city in southern Africa, is the center of gold mining.

(5) **Exports.**—Wool, gold, sugar, and hides.

SEAPORTS.

From Alexandria by Sea to Alexandria.

97. **Alexandria**, on the delta of the Nile, is the chief seaport of Egypt and a very ancient city.

It was named in honor of its founder, Alexander the Great, 332 B. C. Its situation close to the Nile and to the Suez canal, gives it a favorable location for commerce.

98. **Port Said**, at the northern terminus of the Suez canal, and **Suez**, at its southern terminus, owe their importance to their location. At least ten vessels a day pass through this canal and naturally have to stop at each of the above named places.

99. **Berbera**, on the strait of Babel Mandeb, is the capital and chief port of Samoli. A great fair, or bazaar, is held here every year, and thousands of traders from various parts of Asia and Africa, gather to exchange products.

100. **Zanzibar**, on Zanzibar island, off the eastern coast of Africa, is the chief market of the world for ivory and cloves.

101. **Tamatave**, on Madagascar island, is the only good port and the chief commercial center of the island.

102. **Lorenco Marques**, on Delagoa Bay, has the best harbor in the eastern coast.

103. **Port Elizabeth**, in southern Cape Colony, has a very good harbor and is connected with the interior by railway lines.

104. **Cape Town**, the capital and the largest city of South Africa,

has a fine harbor. It is the terminus of the railway lines, which connect it with the chief cities of that region.

105. **Monrovia**, the capital of Liberia, is a commercial and sea-port town, near the mouth of St. Paul's river. It was named after James Monroe, the fifth president of the United States.

106. **Freetown**, the capital of Sierra Leone, is the best British port on the western coast of Africa.

107. **Oran**, on the northern coast of Algeria, has valuable marble quarries.

108. **Algiers**, the capital and chief port of Algeria, is an important coaling station for Mediterranean vessels, and is a great trading center. Its climate is delightful which makes this city a favorite resort for invalids in winter.

109. **Tunis**, on the Mediterranean, near the site of ancient Carthage, is an important port. It is connected with the sea by a canal and ocean-going vessels can land here.

110. **Tripoli**, on the Mediterranean, is the capital of Tripoli. It is the terminus of many important caravan routes which cross the Sahara and over which the products of the Sudan are transported. What are the products of the Sudan?

OTHER NOTED CITIES.

111. **Cairo** (570,062), in the western part, on the Nile river, is the capital and the largest city of Africa. It is a picturesque ancient city, and a favorite resort for tourists.

Near Cairo are the pyramids and the sphinx which are among the oldest structures in the world.

112. **Alexandria** (319,766), p. 205, no. 97.

113. **Tunis** (170,000), p. 206, no. 109.

114. **Johannesburg** (158,600), in the southeastern part of South Africa, is in the center of the gold-mining region. It is connected with the coast by railway.

115. **Fez** (140,000), the northern capital of Morocco, is its chief city.

116. **Algiers** (96,542) is the capital and chief port of Algeria. P. 206, no. 108.

117. **Oran** (87,000), p. 206, no. 107.

118. **Cape Town** (77,183), p. 205, no. 104.

119. **Tananarivo** (55,000), the capital of Madagascar, is the chief city of the island.

120. **Kimberley** (34,300), situated north of the Orange river, has the richest diamond mines in the world. It exports wool, ostrich feathers, and hides, but the value of its diamonds is greater than all its other exports.

121. **Khartum** (40,000), at the confluence of the White and Blue Nile, is a straggling place, covering a wide area, with irregular streets and houses built of sun-dried bricks. Its situation has given it a large trade in gums and ivory.

122. **Pretoria** (22,000), the capital of Transvaal colony, is situated about thirty-two miles northeast of Johannesburg.

The gold rush which began in 1886 had great influence regarding its architecture and sanitation. The town is regularly laid out and many of the streets are planted with splendid willow trees.

123. **Assouan** (10,000), on the Nile river near the first cataract, is noted for the ancient ruins in its vicinity.

A great dam has recently been constructed at Assouan to hold in much of the water of the Nile so that it may be allowed to flow down as needed. This regulates the floods and will make the valley more valuable than ever before as an agricultural region.

COMMERCE.

124. **Trade.** The Mediterranean countries have a good trade with the countries of southern Europe.

The exports to these countries—garden products, ostrich feathers, ivory, gold dust, and leather are all obtained by caravan trade from the Sudan.

The imports from these countries are tools, textiles, and lumber.

The trade of central Africa is almost wholly with Great Britain, France, and Belgium.

Exports to these countries are coffee, gum, copal (a resin from which varnish is made), ivory, and rubber.

The Kongo State is one of the principal sources of rubber in the world.

The colonies of South Africa trade chiefly with Great Britain.

Exports from these colonies are wool, ostrich feathers, hides, gold, and diamonds.

TRANSPORTATION.

125. What animal is employed in transporting the articles of trade?

Railway construction is receiving much attention. Africa has a total railroad mileage of 11,575 miles.

Algeria, Tunis, and Egypt in the north, and British South Africa in the south, are the best equipped with railroads.

Cairo, Suez, and Cape Town have cable connections with Europe.

The principal cities of the settled portions are connected by telegraph.

SEARCH QUESTIONS.

1. If a vessel is in longitude 0° and in latitude 0° in what gulf and ocean is it?

2. Which of the African lakes is crossed by the equator?

3. How was Africa artificially made an island?

4. How does the annual overflow of the Nile affect the fertility of Egypt? At what season of the year does this overflow occur?

5. Where in Africa is the region of the greatest heat?—Egypt and Sudan.

6. What animal is most useful in crossing deserts?

7. Which is the most important country of Africa?

8. What city of the United States is in the same latitude as Cairo?

9. For what is Egypt noted?

10. Name the Nile countries.—Egypt, Nubia, Abyssinia, and Sudan.

11. Which is the largest city of Africa?

12. To what country do the Cape Verde islands belong?

Questions for Class Use.

AFRICA.

What and Where? Page 189.

Mathematical.

1. Locate Africa. 2.—5000. 3.—5000. 4. One-fifth. 5.—37° N. and 35° S. 6.—80° W. and 51° E. 7. Equator. 8. Tropic of cancer. 9. Tropic of capricorn.

Physical. Page 190.

Bounding Waters. Winds.

10. Mediterranean sea. 11. Red sea. 12. Indian ocean. 13. Atlantic ocean. 14. Monsoon Drift. 15. Mozambique Current. 16. Antaretic Current. 17. Benguela Current. 18. Guinea Current.

From the Strait of Gibraltar to the Strait of Gibraltar. Page 190.

Seas, Gulfs, Bays, and Straits.

19. Strait of Gibraltar. 20. Mediterranean sea. 21. Gulf of Gabes. 22. Gulf of Sidra. 23. Suez. 24. Red sea. 25. Strait of Babel Mandeb. 26. Gulf of Aden. 27. Mozambique channel. 28. Delagoa. 29. Gulf of Guinea. 30. Bight of Biafra. 31. Bight of Benin.

From Cape Bon to Cape Bon. Page 191.

32. Cape Bon. 33. Suez. 34. Guardufui. 35. Zanzibar. 36. Madagascar. What is raffia and how used? 37. Cape Agulhas. 38. Cape of Good Hope. 39. St. Helena. 40. Cape Verde. 41. Cape Verde islands. 42. Blanco. 43. Canary islands. 44. Madeira. 45. Azores. 46. Cape Spartel.

Relief. Page 192.

47. What can be said of the general relief of Africa? With what

may Africa be compared as to relief? 48. The great African highland. 49. One of these tongues. 50. The second highland tongue. 51. The third highland tongue. 52. The Atlas mountains. 53. Mt. Kilimanjaro. 54. Mt. Kenia. 55. Mt. Teneriffe. 56. A vast, almost continuous lowland. 57. The deserts of Africa. 58. The Sahara. 59. The Nubian desert. 60. The Libyan desert. 61. The Kalahari desert.

Drainage. Page 194.

62. What can be said of the dry climate and large rivers of Africa? 63. Nile. Discuss the annual overflow of the Nile. Recite poem. 64. The Zambezi. 65. The Orange. 66. The Kongo. 67. The Niger. Name in order of length the five largest rivers of Africa. Are all the rivers of Africa navigable? 68. Victoria Falls. 69. Lake Albert Nyanza. 70. Lake Victoria. 71. Lake Albert Edward. 72. Lake Tanganyika. 73. Lake Bangweolo. 74. Lake Nyassa. 75. Lake Tchad.

Climate. Page 196.

76. Speak in general on the climate of Africa. Discuss the climate of northern Africa. Of central Africa and the Guinea coast. Of southern Africa. To what may the rainless region of the Kalhari desert be ascribed?

Animals. Page 197.

77. What is noteworthy regarding the animals of Africa? Name the large animals of Africa. Speak briefly on the antelope. Gorilla. Camel. Herds of cattle and flocks of sheep. The ostrich and other fowls. Venomous snakes. The locust. What can be said of the ivory product of Africa?

Vegetation. Page 197.

78. Speak briefly on the agricultural products of northern Africa. What can be said of rice? The date palm? The famous baobab tree? Dense forests? Groves of teak? Gum-arabic?

Minerals. Page 198.

79. What can be said of the mineral wealth of Africa? What can

be said of coal and iron? Of the diamond and gold mines? Of copper, lead, and salt?

POLITICAL.

History and Religion. Page 198.

80. Why is Africa called the "Dark Continent?" Discuss the early history of Africa; also how Europeans gradually gained a foothold. Name two great explorers of Africa.

81 What can be said of religion in Africa?

People. Page 199.

82. What is the population of Africa? Discuss the races of mankind living in Africa. What can be said of the various races of negroes?

Government. Page 200.

84. Discuss the government of Africa. The part of Africa not under the control of European nations.

POLITICAL DIVISIONS.

The Barbary States. Page 200.

85. Morocco: (1) Position. (2) Government. (3) Capitals. (4) City. (5) Exports. (6) Imports.

86-87. Algeria and Tunis: (1) Position. (2) Government. (3) Capitals. (4) Exports. (5) Imports.

88. Tripoli and Barca: (1) Position. (2) Government. (3) Capitals. (4) Exports. (5) Imports.

OTHER COUNTRIES OF AFRICA.

89. Egypt: (1) Position. (2) Government. (3) Capital. (4) Cities. (5) Seaports. (6) Exports. (7) Imports. The Nile is in a rainless region; what causes its overflow? What can be said of the ruins of the Temples and pyramids found on the left bank of the Nile?

90. Abyssinia: (1) Position. (2) Government. (3) Capital. (4) Exports. (5) Imports.

91. **The Sahara:** (1) Position. (2) Population. (3) Exports. The negroes of this region.
92. **The Sudan:** (1) Position. (2) Government. (3) Exports. (4) Imports.
93. **Kongo State:** (1) Position. (2) Government. (3) Capital. (4) Exports. (5) Imports.
94. (1) The western coast. Of what does it consist, and what does it comprise? What can be said of the Canary islands? (2) Exports. (3) Imports. (4) Monrovia.
95. **South Africa:** (1) Position. (2) Cape Colony. (3) Orange river. (4) The Transvaal Colony. (5) Exports.

From Alexandria by Sea to Alexandria.

96. Locate and describe Alexandria, Port Said, Berbera, Zanzibar, Tanatave, Lorenzo Marques, Port Elizabeth, Cape Town, Monrovia, Freetown, Oran, Algiers, Tunis, Tripoli.

Other Noted Cities. Page 206.

97. Cario, Alexandria, Tunis, Johannesburg, Fez, Algiers, Oran, Cape Town, Tananarivo Kimberly, Kahrtum, Pretoria, Assouan.

Commerce. Page 207.

98. Discuss the trade of the Mediterranean countries. Of central Africa. Of the colonies of south Africa.

Transportation. Page 208.

99. Discuss the means of transportation. Answer search questions, page 208.

OCEANIA.

(Oceania is V. Grade work).

A land of flowers 'neath southern skies,
The continent Australia lies;
Here feathered warblers bright abound,
And forests with their lays resound.
Here lyre and regent birds we see,
Of royal grace and dignity.

Oceania includes Malaysia or East Indies, Australasia, and Polynesia.

Australasia comprises the continental island of Australia, Tasmania, and New Zealand.

I. AUSTRALASIA.

AUSTRALIA.

What and Where?

MATHEMATICAL.

1. **Australia** is the smallest of the continents and is nearly equal in area to the United States and to Europe. It is located in the southern half of the Eastern Hemisphere, southeast of Asia, between the Pacific and Indian oceans.

2. **2500 miles** is the approximate length from east to west.

3. **2000 miles** is the approximate width.

4. **One-twentieth**—Australia contains about one-twentieth of the land mass of the globe (2,972,573 square miles).

5. **10° and 40°**. Australia lies between 10° and 40° south latitude; hence it extends through (40°–10°) 30° of latitude.

6. **112° and 155°**. Australia lies between 112° and 155° east longitude; hence it extends through (155°–112°) 43° of longitude.

7. **The tropic of capricorn** crosses central Australia, southern Africa, and central South America.

PHYSICAL.

Bounding Waters.

8. **Pacific ocean**, p. 26, no 91.

9. **Indian ocean**, p. 27, no. 93.

10. **East Australian Current**, pp. 46, 47.

11. **West Australian Current**, pp. 46, 47.

12. **Calms of capricorn**, pp. 46, 47.

See winds pp. 46, 47.

From the Gulf of Carpentaria to the Gulf of Carpentaria.

Coast Forms of Land and Water.

13. **Carpentaria** is a large gulf indenting the northern coast of

k peninsula.
 sea from the

ern coast. It
 acific side the
 Australia the

les, on the

the Indian
 er, and tin
 was for a
 of Australia.

about the size
 he sheep folds.
 ustralia and

southeastern

ralia, in the

indents the

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ndian ocean.

rt of Austra-



Australia.

14. **Cape York** is the northern extremity of Cape York peninsula.

15. **Torres** is a strait separating the island New Guinea from the mainland. It connects the Arafura and Coral seas.

16. **Coral** is a sea northeast of Australia.

17. **Great Barrier Reef**, p. 19, no. 18.

This great coral belt extends 1200 miles along the northeastern coast. It has but few openings through which ships can pass. On the Pacific side the breakers dash against this coral wall, while on the side toward Australia the sea is smooth and untroubled.

18. **Sandy Cape**—p. 21, no. 39, b.

19. **Howe** is a cape, southeastern New South Wales, on the Pacific ocean.

20. **Point Philip**—p. 21, no. 39, c.

21. **Tasmania** is an island southeast of Australia, in the Indian ocean. Grazing and the mining of gold, copper, silver, and tin are the chief industries. Hobart is the capital. It was for a long time an English penal colony, but is now a state of Australia.

The Tasmania wolf and Tasmanian devil (a bear-like animal, about the size of a badger) are peculiar to Tasmania. Both cause great loss in the sheep folds.

22. **Bass** is a strait. It separates Tasmania from Australia and connects the Pacific and Indian oceans.

23. **Encounter bay** is an arm of the Indian ocean, southeastern South Australia.

24. **Kangaroo** is a small island, south of South Australia, in the Indian ocean.

25. **Spencer gulf** is an arm of the Indian ocean. It indents the southern coast of South Australia.

26. **The great Australian bight** is a large southern indentation of Australia, on the Indian ocean.

27. **Arid** is a cape of southwestern Australia on the Indian ocean.

28. **Leeuwin** is a cape off the extreme southwestern part of Australia.

lia, on the Indian ocean.

29. **Northwest cape**—p. 21, no. 39, d.

30. **Leveque** is a cape on the northwestern coast, on the Indian ocean.

31. **Timor sea**, north of Australia, is enclosed by Australia and the East Indies.

32. **Melville** is an island off the northern coast of Australia in the Timor sea.

33. **Arafura** is a sea, north of Australia, enclosed by Australia, New Guinea, and other East India islands.

RELIEF.

34. A low plateau broken by short mountains ranges covers the eastern half of Australia.

35. **The Dividing Range**, a mountainous belt, skirts the eastern and southeastern coast. It attains its greatest height in a chain called the Australian Alps.

36. **The Australian Alps** are located in the southeastern part of Australia.

37. **Mt. Kosciusko**, over one and one-fourth miles high, is a peak of the Australian Alps in the southeastern part of Australia.

The highlands of Australia are worn-down mountains and may be compared to our Appalachian mountains.

38. A great plain occupies nearly the western half of the continent.

39. **The great Victoria desert** is located in the southwestern part of Australia.

Deserts and scrubs occupy large areas of the interior. The deserts are destitute of vegetation. The scrubs are covered with a dense growth of shrubs or low trees.

The trade winds leave most of their moisture in the range of mountains lying on the windward side of the continent and become dry and warm winds as they blow over the interior. To this and to the calms of capricorn are due the desert

and scrub regions of the great central plain.

DRAINAGE.

40. **The Murray** with its tributaries, the most important of which is the Darling, drains a great part of southeastern Australia, west of Dividing Range. It flows in a general southwestern direction into Encounter bay, an arm of the Indian ocean.

41. **Lake Eyre**, 42. **lake Torrens**, and 43. **lake Gairdner** vary in size and saltiness according to the season.

44. **Lake Amadeus** is a large salt lake west of the center of Australia.

Why are the lakes of Australia salt?

(Australia Continued)

45.

CLIMATE.

The climate of Australia is generally hot and dry but very healthful.

(a) **The northeastern and eastern coast** have an abundant rainfall. Why?

The climate of southeastern Australia is as mild as that of Europe.

(b) **In the interior** droughts are extreme. Why?

(c) **The southwest corner** has an abundant rain brought by prevailing westerlies which blow from the Indian ocean to this corner.

In Australia the seasons are opposite ours—Christmas is in mid-summer and the Fourth of July in mid-winter. The Australian farmer sows his seed when we are gathering our harvests, and he gathers his harvest when we sow our seed.

46.

ANIMALS.

(a) **The animals of Australia** are unlike those of any other part of the world.

(b) **There are among them** no beasts of prey. The common domestic animals have been imported by the English, and the sheep do especially well. Australia surpasses all other countries in the production of wool.

(c) **It has many pouched animals**; of these the kangaroo is the principal type.

(d) **There are many parrots and other birds** of beautiful plumage. The most interesting of them are the lyre bird, so named from the shape of its tail, the bird of paradise, the emu or Australian ostrich, and the black swan.

Other peculiar animals are the duck-bill, the echidna, and the kaola. The pearl oyster is found in the waters bordering Australia.

The kiwi, or apteryx, is peculiar to New Zealand.

47.

VEGETATION.

(a) **More than half the species of plants** that grow in Australia are peculiar to that continent.

(b) **There are dense forests** chiefly of evergreens, which produce a fine quality of hard wood; such as, the eucalyptus and many other gum trees, the acacia that has very small leaves, and other trees that have no leaves at all.

(c) **On the plains** there is a dense growth of thorny bushes and cactus plants.

The eucalyptus yields a fine quality of tough durable timber. The average height of the tree is over 300 feet, but it has been known to attain the height of 500 feet.

48.

MINERALS.

About one-fourth of the world's supply of gold comes from Australia, and it is also one of the great tin and copper regions of the world.

POLITICAL.

HISTORY.

49. **It is not known** when Australia was first discovered by Europeans, but the first authenticated discovery is said to have been made in 1601 by a Portuguese. During subsequent years discoveries were made by various European nations, and in 1770, Cook carefully surveyed the east coast, named a number of the places, and took possession of the country for Great Britain. In 1788, England sent a ship-load of convicts, with soldiers as guards to Australia, thus laying the foundation of the colony.

Convicts were long sent from the mother country, but the transportation

practically ceased after 1868. In all about 70,000 convicts were landed at Australia, and almost as many at Tasmania.

Australia has never been wanting for explorers and since 1870, a year has scarcely passed that an expedition of some kind has not been at work.

RELIGION.

50. **Various forms of religion** are in practice in Australia. As to the number of adherents, the church of England ranks first and the Roman Catholic church second.

Catholicity was brought to Australia by the thousands of unoffending Irish political prisoners who were sent to the penal settlements by England.

When Australia at length became a freeman's country, the Catholic population increased rapidly. The present Catholic population of Oceania numbers nearly one million.

PEOPLE.

51. **The population of Australia** is nearly 4 million. The people belong to the white and black races.

(a) **Most of the people** of Australia belong to the white race, they are emigrants from Great Britain.

(b) **An unknown number** of black-skinned people still live in the wild state in small and scattered communities, in regions extending from central Queensland almost to the western coast of Australia.

(c) **A few Chinese and Malays** are also found in Australia.

GOVERNMENT.

52. **Australia** is divided into five colonies, which, with Tasmania, form the commonwealth of Australia. This federation is ruled by a governor general appointed by the British crown, and a parliament chosen by the people.

53.

DIVISIONS AND CAPITALS.

(1) **Victoria.** Melbourne is the capital and the largest city of Oceania.

(2) **New South Wales,** Sydney.

(3) **Queensland,** Brisbane.

- (4) South Australia, Adelaide.
- (5) West Australia, Perth.
- (6) Tasmania, Hobart.

COMMERCE.

54. Two-thirds of the trade of Australia is with Great Britain. Why?

55. Exports:

To Great Britain—wool, foods, and metals.

To the United States—wool, hides, hemp, and rabbit skins used in making hats.

56. Imports:

From Great Britain—textiles, iron goods, machinery, ships, chemicals, and manufactures.

From the United States—flour, oil, steel, machinery, tobacco, paper, lumber, and explosives.

Australia is one of the great gold, tin, and copper regions of the world and surpasses all other countries in the production of wool.

The salt bush of the eastern plains furnishes excellent grazing for sheep. The flesh of the sheep of this region has a better flavor and the wool a finer texture than that of sheep of other regions. Australia has been called the "Land of wool and gold."

SEAPORTS.

57. Melbourne, the capital of Victoria, in the southeast, is the largest city of Australia and the chief commercial center of the continent. It is a picturesque city situated in the midst of beautiful scenery. Its harbor is excellent and it is well equipped with docks and ship-yards.

58. Sydney, the capital of New South Wales, on the southeast coast, is the second commercial city of Australia. Its harbor is fine and it is the terminus of many oceanic mail routes.

60. Adelaide, the capital of South Australia, on the southern coast, opposite Kangaroo island, is the third commercial city in importance. Vessels coming from Europe stop at this port and leave their mail, which is then sent to the other chief cities by

railroad.

61. **Brisbane**, the capital of Queensland, on the eastern coast, is the principal city and likewise the chief seaport and commercial center.

62. **Hobart**, the capital of Tasmania, is located near the mouth of the principal river. It has a good harbor and is a noted summer resort.

63. **Perth**, the capital of western Australia, is the chief commercial center on the western coast.

64.

NEW ZEALAND.

(1) **The British Colony of New Zealand** is like Tasmania, included in Australasia. It is located 1200 miles southeast of Australia and consists of two large islands, North Island and South Island, and many small islands. The chief part of the group is like a great boot with the sole turned toward the equator, and the toe toward Australia.

North Island is the foot of the boot; South Island its leg, and little Stewart Island is the loop through which one puts his finger to put the boot on.

(2) **North Island** is noted for its active volcanoes, hot springs, and geysers like those of Yellowstone park; while

(3) **South Island** is noted for its snow-capped mountains and glaciers.

(4) **The climate** is warmer than that of England. The rainfall which is more than forty inches a year is heaviest on the western side where it is deposited by the prevailing westerlies.

New Zealand lies in the region of the "Roaring Forties," a part of the ocean so called from its terrible storms.

(5) **The principal products and exports** are: grain, wool, meats, dairy products, kauri gum, gold.

Kauri gum is a resin of a sort of pine tree used in making fine varnish, etc.

(6) **Wellington**, North Island, on Cook strait, is the capital. Dunedin, on the southern coast of South Island, is the principal seaport.

(1) **Position.**—The East Indies, called also Malay archipelago, or Malaysia, are located in the Pacific ocean southeast of continental Asia. They comprise the most extensive group of islands on the globe. They extend in a curve from the strait of Malacca to the strait of Formosa.

The largest and most important islands of this group are Sumatra, Java, Celebes, Molucca (Spice islands), Borneo, New Guinea, and the Philippines.

(2) **Government.** Sumatra, Java, Celebes, Molucca, and parts of Borneo and New Guinea belong to the Netherlands and are called the Dutch East Indies.

Northern Borneo is a British possession.

The northern part of eastern New Guinea, or Papua, is a German possession, and the southern half, a British possession.

To whom do the Philippines belong?

(3) **This island group** is one of the most remarkable of the volcanic regions in the world. Java and Sumatra have very many volcanoes.

(4) **The animals of Malaysia**, west of the Celebes islands, are similiar to those of southeastern Asia—the monkey, tiger, rhinoceros, tapir, and elephant.

East of the Celebes islands, the animals resemble those of Australia. The orang-outang, a large ape resembling the gorilla, is peculiar to Sumatra and Borneo.

(5) **The principal products** of these islands are: coffee, grown chiefly in Java; tobacco, in Sumatra; and pepper and cocoanut, in Borneo. Most of our cloves and nutmegs are furnished by the Molucca, or Spice Islands. A great part of the world's tin is mined in these islands and forms the most important mineral product of the archipelago.

We buy Java coffee, Sumatra tobacco, Banca tin, also sugar, gums, and spices that are produced in the Dutch East Indies, in Holland. We sell kerosene and machinery to the Dutch East Indies through Holland. Explain. How do Borneo and New Guinea rank in size with the largest islands of the globe? P. 18, no. 8.

66.

MELANESIA.

(1) **Position.** Melanesia, "Land of the Blacks", comprises the Solomon islands, New Hebrides, New Caledonia, and the Bismarck archipelago.

(2) **Government.** The Solomon islands belong to Great Britain and Germany; New Hebrides and New Caledonia belong to France; and the Bismarck islands belong to Germany.

New Caledonia is a mountainous island east of Australia. It and Loyalty islands are used by the French as convict colonies.

POLYNESIA.

(1) **Position.**—Polynesia (many islands) comprises all the islands lying east of the longitude of New Zealand. The most important of these are: The Fiji, belonging to Great Britain; and the Samoa islands, which belong to Germany, except Tutuila and other small islands, belonging to the United States. P. 123. no. 126.

68.

MICRONESIA.

(1) **Position.**—Micronesia comprises the islands extending southward from Japan to New Guinea, the principal groups of which are Gilbert, Marshall, Carolines, Pelew, and Ladrone islands. Guam, one of the Ladrone islands, belongs to the United States. P. 122, no. 126.

(2) **Wake island,** p. 123, no. 126.

Questions for Class Use.

OCEANIA. Page 212.

Recite Poem. What does Oceania include?

I. AUSTRALASA.

AUSTRALIA.

WHAT AND WHERE?

Mathematical.

1. Locate Australia. 2. 2,500 miles. 3. 2,000 miles. 4. One-twentieth. 5. 10° and 40° . 6. 112° and 155° . 7. Tropic of capricorn.

Physical. Page 213.

Bounding Waters.

8. Pacific ocean. 9. Indian ocean. 10. East Australian current. 11. West Australian current. 12. Calms of capricorn. Winds. From the Gulf of Carpentaria to the Gulf of Carpentaria.

Coast Forms of Land and Water. Page 213.

13. Carpentaria. 14. Cape York. 15. Torres. 16. Coral. 17. Great Barrier Rief. 18. Sandy cape. 19. Howe. 20. Point Philip. 21. Tasmania. 22. Bass. 23. Encounter bay. 24. Kangaroo. 25. Spencer. 26. Great Australian bight. 27. Arid. 28. Leeuwin. 29. Northwest cape. 30. Leveque. 31. Timor. 32. Melville. 33. Arafura. 34. A low plateau. 35. Dividing range. 36. Australian Alps. 37. Mt. Kosciusko. 38. Great plain. 39. Great Victoria desert, its vegetation and its cause. 40. Murray river. 41. Lake Eyre. 42. Lake Torrens. 43. Lake Gairdner. 44. Lake Amadeus.

Australia continued.

45.

Climate. Page 216.

Discuss the climate and rainfall.

46. **Animals.** Page 216.

What can be said of the animals of Australia? The domestic animals? Pouched animals? Parrots and other birds?

47. **Vegetation.** Page 217.

Discuss the species of plants. The dense forests. Growth of thorny bushes and cactus plants.

48. **Minerals.** Page 217.

What can be said of the mineral resources of Australia?

49. **Political.** Page 217.

Discuss the early history of Australia. Australia as a convict colony.

50. **Religion.** Page 218.

What can be said of the religion of Australia?

51. **People.** Page 218.

What is the population? Discuss the races of mankind inhabiting Australia.

52. **Government.** Page 218.

How is Australia governed?

53. Name its principal states and the capital of each.

Commerce. Page 219.

54. With what country does Australia trade chiefly? What can be said of Australia as to its exports and imports? Its gold, tin, copper and wool productions?

57. **Seaports.** Page 219.

Locate and describe Melbourne, Sidney, Adelaide, Brisbane, Hobart, Perth.

64. **New Zealand.** Page 220.

Locate. Describe North island, South island. The climate. What are the principal products and exports? Capital and principal seaport?

65. **Malaysia.** Page 221.

Locate and tell what it comprises. Name the most important islands of this group. What can be said of the government of this group of islands? What can be said of these islands as a volcanic region? Of the animals? What are the principal products?

66. **Melanesia.** Page 222.

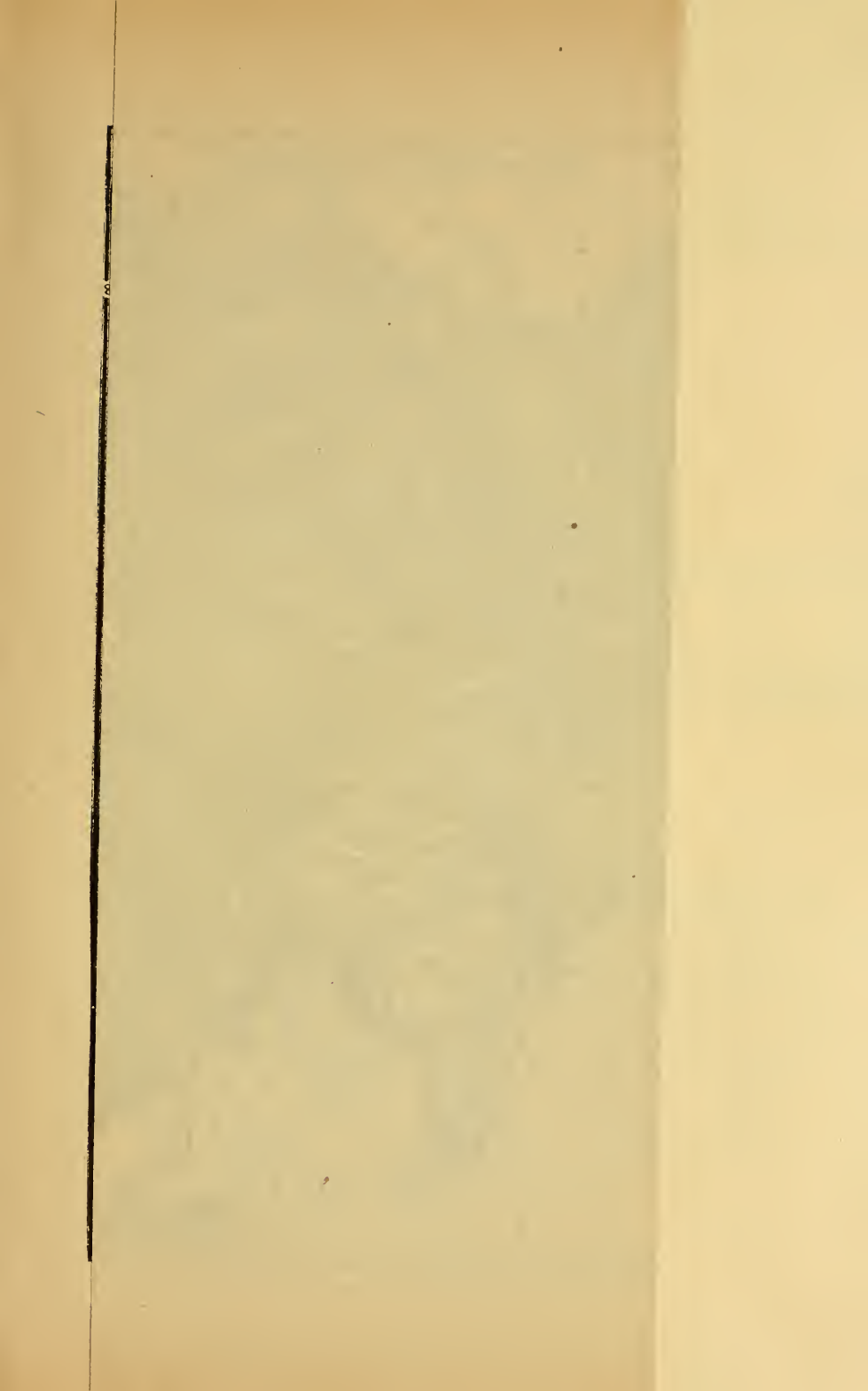
Locate. What can be said of the government? Of New Caledonia and Loyalty islands?

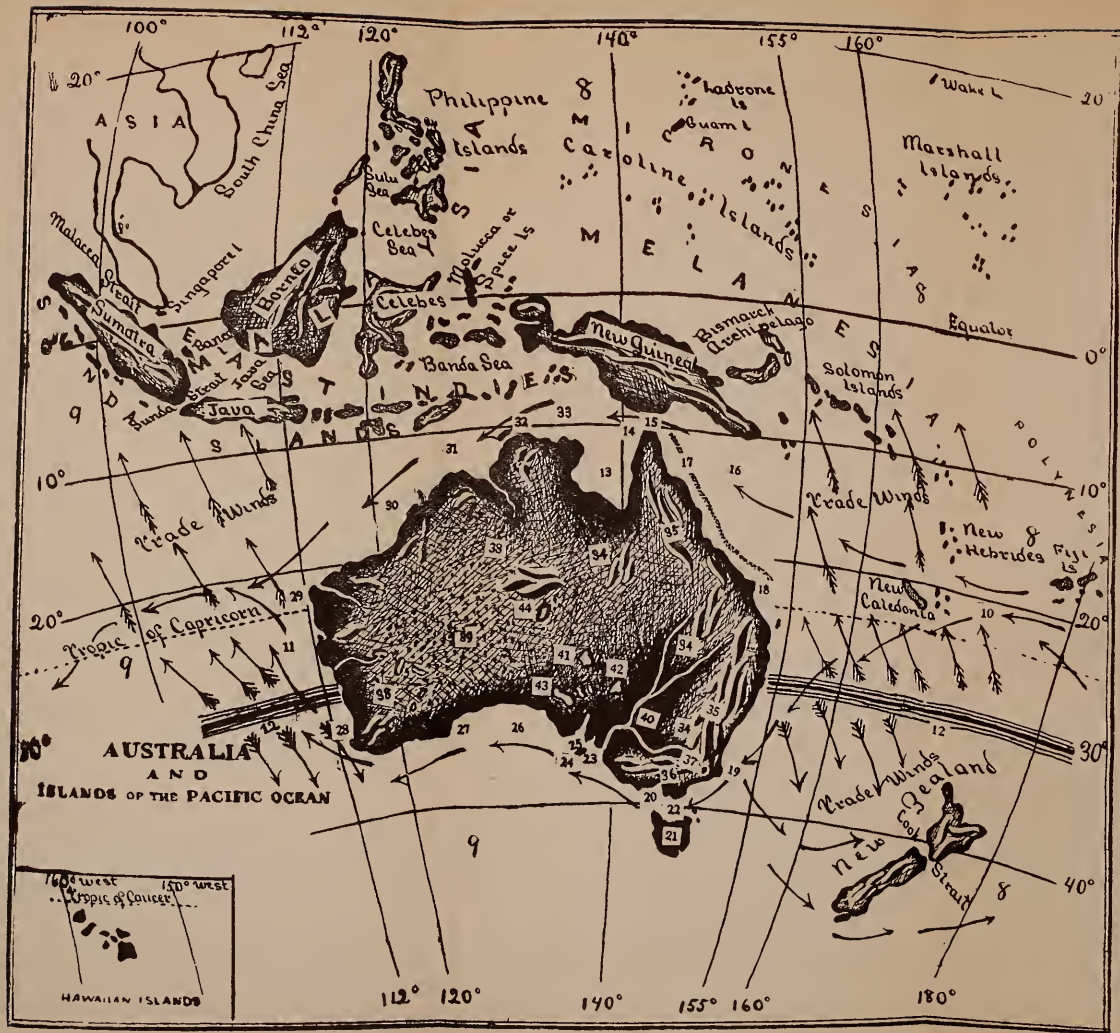
67. **Polynesia.** Page 222.

Locate. What does this group comprise?

68. **Micronesia.** Page 222.

Locate Micronesia. What islands does it comprise? What can be said of Wake island?





Eurasia.

Stretching upward to the north Pole, stretching south to torrid clime,

From the Bering sea extending unto Old Atlantic's brine,

Lies this mighty land, Eurasia, with her plains and high plateaus,

With her forest lands and deserts, with her crests all wreathed in snows;

While her lofty ranges center round Pamir plateau so high

And Mt. Everest's towering summit seems to pierce the fair blue sky,

And her vastness and her beauty and her grandeur so sublime,

All bear witness to the greatness of a wondrous Pow'r divine.

COAST FORMS OF LAND AND WATER.

The study of Eurasia is VI. Grade work.

1. **The mainland of Eurasia** is composed of Europe and Asia. It is the largest mass of land on the globe, and contains two-fifths of the land area of the globe.

2. **It is situated** entirely in the northern half of the Eastern Hemisphere, and is separated from North America by Bering Strait; it is connected with Africa by the isthmus of Suez.

WHAT AND WHERE?

Bounding Waters. Winds.

1. Arctic ocean, p. 27, no. 95.
2. Pacific ocean, p. 26, no. 91.
3. Indian ocean, p. 27, no. 93.
4. Mediterranean Sea, p. 228, no. 31.
5. Atlantic ocean, p. 27, no 92.
6. Bering Strait Current, p. 29, no. 110,a
7. Japan Current, p. 28, no. 108, c
8. Monsoon Drift, pp. 46, 47.
9. Trade Winds, p. 41, no. 214.
10. Calms of Cancer, p. 40, no. 212.
11. Prevailing Westerly Winds, p. 41, no. 216.

From Bering Strait to Bering Strait

Seas, Gulfs, Bays, Sounds, and Straits.

12. Bering strait, p. 69, no. 23.

13. Bering sea, p. 69, no. 21.

14. The sea of Okhotsk, northeastern Asia, is an arm of the Pacific, and is partly enclosed by Siberia, the northern Japanese islands, and Sakhalin island.

15. The sea of Japan, eastern Asia, is an arm of the Pacific and is partly enclosed by Korea, Siberia, and the Japanese islands.

16. The channel of Tartary is an arm of the Japan Sea, between Siberia and the Sakhalin island.

17. Korea strait connects the Japan sea with the east China sea, and separates Korea from the Japanese islands.

18. The Yellow sea indents eastern Asia. It is partly enclosed by Korea and China.

19. The East China sea, eastern Asia, is an arm of the Pacific, partly enclosed by China, Korea and the Japanese islands.

20. The South China sea, southeastern Asia, is an arm of the Pacific, partly enclosed by Indo-China, China, Formosa, and the East Indies.

21. The gulf of Siam is an arm of the Pacific; it indents southern Indo-China.

22. The strait of Malacca connects Java sea and the bay of Bengal, and separates the island of Sumatra from the Malay peninsula.

Straits Settlements, which occupy the lower part of the Malay peninsula, belong to the British Empire and give the English control of the Strait of Malacca. The city of Singapore, on an island at the end of the Malay peninsula, is strongly fortified.

23. The bay of Bengal is an arm of the Indian ocean; it indents India and Lower Burma.

24. The Arabian sea, southern Asia, is an arm of the Indian Ocean, partly enclosed by India, Baluchistan, Persia, and Oman.

25. The gulf of Oman is an arm of the Arabian sea; it indents Persia and Oman.

26. The Persian gulf is an arm of the Arabian sea; it indents Persia, Turkey, and Oman.

27. The gulf of Aden is an arm of the Arabian sea between the Arabian peninsula and Africa.

28. The strait of Babel Madeb, "the gate of tears", connects the Red sea and the gulf of Aden, and separates the Arabian peninsula from Africa.

Connect Bible facts with the Red Sea.

30. The Suez Canal, p. 58, no. 24, a.

This canal has shortened the distance by water between western Europe and the East Indies, and enables vessels to follow a safer route than that around the cape of Good Hope. It was largely built by the French, but is now under English control.

31. The Mediterranean sea, southern Europe, is the largest inland sea in the world. It is bordered on the north by Spain, France, Italy, Austria Hungary, Montenegro, Greece, and European and Asiatic Turkey; and on the south by Egypt and the Barbary states.

The Mediterranean, "the sea in the middle of the land," may be called the cradle of early navigation. This inclosed sea offered opportunity for the expansion of commerce and for the introduction of Asiatic civilization. A powerful nation developed on the Grecian peninsula, from which civilization spread over the rest of Europe.

32. The Aegean sea is an arm of the Mediterranean, partly enclosed by Greece and Asiatic Turkey.

33. The strait of Dardanelles connects the Aegean and Marmora seas, and separates European Turkey from Asiatic Turkey.

34. The sea of Marmora, connected with the Aegean sea by the Dardanelles and with the Black sea by the Bosphorus, separates

European and Asiatic Turkey.

This sea is noted for the marble quarries on its islands.

35. The Bosphorus, a strait connects the great Black sea with the little sea of Marmora. It winds in and out through the deep mountain valley which lies between Europe and Asia. It is controlled by Turkey.

The Bosphorus is one of the great water highways between Europe and Asia. The strait is only nineteen miles long, but so wide and deep that the largest ocean steamer can easily navigate it.

36. The Golden Horn is the horn-shaped inlet on the northern side of the lofty peninsula, which extends far out into the water, where the strait of Bosphorus enters the Marmora sea. On this inlet which forms a wide, deep harbor, Constantinople, one of the most beautiful cities of the world, is located.

37. The Black sea indents southeastern Europe and western Asia; it is enclosed by Bulgaria, Roumania, European Russia, Caucasia, and European and Asiatic Turkey. It is next to the Mediterranean and the Caspian seas, the largest inland sea in the world. Three large rivers of Europe, the Danube, the Dnieper, and the Don, empty into this sea.

38. The Sea of Azof, southern Europe, is an arm of the Black sea; it is enclosed by European Russia and its Crimean peninsula.

39. The strait of Otranto connects the Mediterranean and the Adriatic seas, and separates lower Italy from European Turkey.

40. The strait of Messina separates the island of Sicily from lower Italy. See p. 25, no. 69, last fact.

41. The strait of Gibraltar connects the Mediterranean sea and the Atlantic ocean, and separates Spain from Morocco.

Gibraltar, Spain, the strongest fortified city in the world, is situated on an enormous promontory commanding the strait of Gibraltar. This fortification belongs to England and is the key to the Mediterranean, and through it to the Suez canal. It protects the English ships which must go through it to and from Asia, Australia, and the Mediterranean ports.

42. **The bay of Biscay** is an arm of the Atlantic ocean; it indents northern Spain and western France.

43. **St. George's channel** connects the Irish sea and the Atlantic ocean, and separates Ireland from England.

44. **The Irish sea** is an arm of the Atlantic, partly enclosed by Ireland and Great Britain.

45. **The North channel** connects the Irish sea and the Atlantic ocean, and separates Scotland from northern Ireland.

46. **The English channel** is situated between southern England and northern France.

47. **The strait of Dover** connects the North sea and the English channel and separates southeastern England from northwestern France.

48. **The North sea**, western Europe, is an arm of the Atlantic, partly enclosed by Great Britain, Belgium, Netherlands, the German Empire, Denmark, and Norway.

49. **The Skagerrack** connects the Cattegat and the North sea, and separates Norway from Denmark.

50. **The Cattegat** connects the Baltic sea and the Skagerrack and separates Sweden from Denmark.

51. **The Baltic sea**, western Europe, is an arm of the North sea, partly enclosed by Denmark, Sweden, European Russia, and the German Empire.

52. **The gulf of Finland** is an arm of the Baltic sea; it indents western European Russia.

53. **The gulf of Bothnia** is an arm of the Baltic sea; it indents western European Russia and Sweden.

54. **The White sea**, northern Europe, is an arm of the Arctic ocean, enclosed by northern European Russia.

55. **The Kara sea**, northern Asia and Europe, is an arm of the Arctic ocean, partly enclosed by Nova Zembla islands and European

and Asiatic Russia.

56. The gulf of Ob is an arm of the Arctic ocean; it indents northern Asiatic Russia.

From East Cape to East Cape.

Peninsulas, Capes, and Islands.

57. East cape, or cape of Deshnef, is the most eastern cape of Asia, northeastern Siberia, on Bering strait.

58. Kamchatka is a northeastern peninsula of Siberia; it projects southward and is washed by the waters of Bering sea, Pacific ocean, and sea of Okhotsk.

59. Sakhalin is an island off the Eastern coast of Siberia; it is surrounded by the waters of the sea of Okhotsk and the channel of Tartary. The northern part of it belongs to Siberia and the southern part, to the Japanese Empire.

60. Formosa is an island east of southern China in the south China sea. It is crossed by the tropic of cancer.

What part of North America is crossed by the tropic of cancer?

61. The Japanese islands compose the Japanese Empire and comprise a chain of about four thousand islands, properly known as the "Sunrise Kingdom". They are situated in the Pacific ocean off the eastern coast of Asia, in about the same latitude as the United States, and extend in three curves from the peninsula of Kamchatka to the southern end of Formosa island.

What four seas are partly enclosed by these islands? The four largest of these islands are: Yesso, Hondo, Kiushu, and Shikoku.

62. Korea is a peninsula of eastern Asia, washed by the waters of the Japan and Yellow seas.

Korea, known as the "Hermit Kingdom," is now under the control of Japan.

63. Hongkong is an island southeast of China, near the mouth of the Canton river, in the South China sea.

It was ceded to Great Britain in 1842, and is the center of a large foreign trade.

64. The East Indies, in the Pacific ocean, southeast of continental Asia, comprise the most extensive group of islands on the globe. They extend in a curve from the strait of Malacca to the strait of Formosa.

65. Malay peninsula is the extreme southern end of continental Asia; it projects southward and is washed by the waters of the gulf of Siam, South China sea, Malacca strait, and the bay of Bengal.

66. Ceylon is an island southeast of the southern extremity of India; it belongs to the British Empire, and is the third greatest tea-producing region in the world. Colombo is the capital and the most central port of the Indian ocean.

67. Point de Galle is the most southern point of the island of Ceylon.

68. Cape Comorin is the most southern point of India.

69. Indian peninsula, southern Asia, projects southward, and is washed by the waters of the bay of Bengal, Indian ocean, and Arabian sea.

70. The Arabian peninsula, southwestern Asia, projects southward and is washed by the waters of the Persian gulf, gulf of Oman, Arabian sea, gulf of Aden, and Red sea.

71. The isthmus of Suez connects Turkey and Egypt. P. 189 no.31.

72. Cyprus is an island under British control, lying south of Asia Minor, in the eastern part of the Mediterranean sea.

73. Crete is an island south of Turkey in the eastern part of the Mediterranean sea. It is a part of the Turkish Empire.

74. The peninsula of Asia Minor, or Anatolia, western Asia, is washed by the waters of the Mediterranean sea, Aegean sea, the Dardanelles, Marmora sea, the Bosphorus, and the Black sea.

75. The Balkan peninsula (from the Turkish word for mountain), southern Europe, comprises the five Balkan states; it projects southward and is washed by the waters of the Black sea, the Bosphorus, Marmora sea, the Dardanelles, Aegean sea, Mediter-

anean sea, strait of Otranto, and the Adriatic sea.

76. The Grecian peninsula occupies the southern part of the Balkan peninsula. A great part of its area consists of islands.

77. The isthmus of Corinth connects the nearly cut-off lower part of the Grecian peninsula, called Morea, with the mainland. It is cut by a ship-canal.

78. The Italian peninsula, southern Europe, comprises the boot-shaped portion of Europe extending southward into the Mediterranean sea. It is washed by the waters of the Adriatic sea, strait of Otranto, and the Mediterranean sea.

79. Sicily is an island off southern Italy in the Mediterranean sea. It is separated from Italy by Messina strait. It belongs to Italy. P. 25, no 69.

80. Malta is an island south of Sicily in the Mediterranean; it belongs to England and here are the headquarters of the British Mediterranean fleet.

81. Sardinia is an island in the Mediterranean sea, south of northern Italy and Corsica. It belongs to Italy.

82. Corsica is an island in the Mediterranean sea, south of northern Italy. It belongs to France.

It was the birthplace of Napoleon the Great.

83. The Balearic islands in the Mediterranean sea, east of Spain, belong to Spain.

84. The Spanish or Iberian peninsula, southwestern Europe, comprises the kingdoms of Portugal and Spain. It projects southwest, and is washed by the waters of the Mediterranean sea, strait of Gibraltar, Atlantic ocean, and bay of Biscay.

85. St. Vincent is a cape, southwestern Portugal, in the Atlantic ocean.

86. Finisterre, northwestern Spain, is the most westerly cape of continental Europe.

87. The British Isles, in the Atlantic ocean, west of continental Europe, comprise the most important island group in the world. They compose the United Kingdom of Great Britain and Ireland.

88. Great Britain, the largest of the British Isles, which includes England, Scotland, and Wales, is surrounded by the Atlantic ocean, North sea, strait of Dover, English channel, St. George's channel, and the Irish sea.

89. Ireland is surrounded by the Atlantic ocean, North channel, Irish sea, and St. George's channel.

90. Land's End is a cape, southwestern England, on the Atlantic.

91. The Isle of Man, in the Irish sea, is a part of the British Empire, but practically independent.

92. The Channel islands, right across the English channel, very near to France, belong to great Britain.

Jersey, Guernsey, and Alderney, are the largest, and are noted for their fine breed of cattle called Jerseys, Guernseys, and Alderneys.

93. The Hebrides islands, in the Atlantic ocean, northwest of the coast of Scotland, are noted for their grand mountain scenery.

94. The Orkney islands, in the Atlantic ocean, off the northern coast of Scotland, are bleak and dreary; they have important fisheries.

95. The Shetland islands, in the Atlantic ocean, northeast of Scotland, are noted for their little Shetland ponies.

The Hebrides, the Orkney, and the Shetland islands belong to Scotland.

96. The Faroe islands, in the Atlantic ocean, north of Scotland, belong to Denmark.

97. The Danish, or Jutland peninsula, northern Europe, projects northward and is washed by the waters of the North sea, Skagerrack and Cattegat channels, and the Baltic sea.

98. The Scandinavian peninsula (Land of the Midnight Sun), northwestern Europe, is the largest peninsula of Europe, and comprises the two kingdoms of Norway and Sweden; it projects

southward, and is washed by the waters of the North sea, the Atlantic ocean, Skagerrack and Cattegat channels, Baltic sea, and gulf of Bothnia.

99. The Naze is a southern cape of Norway on the Skagerrack Channel.

100. Lofoden islands are a group of numerous islands that skirt the coast of the Scandinavian peninsula. They are noted for their great cod, herring, and lobster fisheries.

The Maelstrom, fabled to suck in and swallow up vessels, whales, etc., is simply a violent current or tidal whirlpool, off the northwest coast of Norway, immediately southwest of the southernmost Lofoden isles.

The many islands lining the coast of the Scandinavian peninsula form a break-water against the storms, and cause a smooth sea between the ocean and the mainland.

101. North Cape, Norway, the northernmost point of continental Europe, is the northern extremity of Norway in the Arctic ocean.

During several months of summer, numerous travelers visit North Cape to see the midnight sun.

102. Spitzbergen, in the Arctic ocean, is a group of islands north of the Scandinavian peninsula.

103. Nova Zembla, in the Arctic ocean, comprises two islands off the northern coast of European Russia.

104. Franz-Josef Land, in the Arctic ocean, comprises a group of Islands, north of European Russia.

105. North East cape, northern Asiatic Russia, on the Arctic, is the northernmost land of Asia.

106. New Siberia, in the Arctic ocean, comprises a group of islands, north of Asiatic Russia.

107. Wrangell, in the Arctic ocean, is an island north of north-eastern Asiatic Russia.

RELIEF.

The great Eurasian highland extends as a continuous ridge of elevation from Bering strait to the Mediterranean sea, where it is cut by the Black sea. From

the Black sea it extends as a broken and much narrower highland through southern Europe to the Atlantic ocean. The Eurasian highland is widest in central Asia, where it is as wide as the United States from Chesapeake bay to San Francisco (about 3,000 miles).

From the Pamir Plateau to Bering Strait and Back.

Plateaus, Deserts, Mountains.

108. The Pamir plateau, in southern Asia north of India, is a narrow, but rugged and lofty tableland, nearly three miles high. This plateau is called the "Roof of the World", for from it radiate the loftiest mountain ranges of the world.

Though the surface in general is bare and barren, parts of it furnish pasturage for cattle, and two recognized trade routes have traversed it for ages.

109. The Tibet plateau is an extensive table-land of an oval form in southern Asia between the Himalayas and the Kuenlun mountains.

The Pamir and Tibet plateaus are the two loftiest plateaus on the globe. Tibet is regarded as the highest inhabited region of the world. It is in the Chinese Empire.

110. The plateau of Mongolia, the great table-land of central Asia, extends northeast from the Pamir plateau and is an arid region embracing the plateau of Turkestan and the great desert of Gobi.

This plateau is bordered on the northwest by the Thian Shan, Altai, and Yablonoi mountains; on the east and south, by the Khinghan and Kuenlun mountains. It is in the Chinese Empire.

111. The plateau of Turkestan comprises the southwestern part of the Mongolian plateau.

112. The Gobi (naked desert) is a rainless, sandy region, comprising an area of about three hundred thousand square miles.

It is in the Chinese Empire.

113. The Thian Shan mountains extend northeast from the Pamir plateau; they form the northwestern border of the southwestern part of the Mongolian plateau, often called the plateau of Turkestan.

They are in the Chinese Empire.

114. The Altai mountains form the northwestern border of the central Mongolian plateau.

They are in the Chinese Empire.

115. The Yablonoi mountains form the northern border of the eastern Mongolian plateau.

They are in southern Siberia.

116. The Stanavoi mountains are in southeastern Siberia.

117. The Khinghan mountains form the southeastern border of the eastern Mongolian plateau.

118. The Kuenlun mountains extend east from the Pamir plateau, and separate the plateau of Tibet from the plateau of Turkestan, as the southwestern part of the Mongolian plateau is called.

119. The Himalaya mountains (abode of snow) extend southwest from the Pamir plateau and form the southern border of the Tibet plateau. They are the highest mountains of the globe.

Some of its peaks rise two miles higher than the highest peaks of the Alps. Along their entire length of 1,500 miles they rise far above the line of perpetual snow, and vast fields of solid ice, or glaciers, from thirty to sixty miles in length move down the slopes.

120. Mt. Everest, p. 22, no. 49, d.

121. Parallel mountain chains, separated from each other by great rivers, and sometimes called the plateau of Indo-China, extend southward from the eastern part of the central highland and spread over all the peninsula of Indo-China into the southern extremity of the Malay Peninsula.

122. The plateau of Dekkan is the table-land occupying the peninsula portion of India, bordered on the east by the Eastern Ghats, on the west by the Western Ghats.

From the Pamir plateau to the Strait of Gibraltar.

Plateaus, Deserts, Mountains.

123. The Plateau of Iran, about one-third as high as the plateau of Tibet, extends eastward from the Pamir plateau, and lies between the valley of the Indus river on the east, and that of the Euphrates and Tigris on the west. It comprises rugged mountains and salt deserts with many fertile valleys.

It includes the countries of Persia and Afghanistan. The Elburz mountains border the plateau on the north, the Zagros mountains on the south and west, and the Sulaiman on the east.

124. The plateau of Asia Minor occupies the peninsula of Asia Minor. It is rugged and mountainous, and comprises numerous salt lakes and fertile valleys. It is prolonged eastward to the Caucasus mountains where it is known as the plateau of Armenia.

125. The plateau of Armenia is much higher than the plateau of Asia Minor, but possesses a richer soil.

126. The plateau of Arabia occupies the Arabian peninsula. It has a small, well-watered, and fertile mountainous tract in the interior, but the greater part of the plateau is a dry, hot desert.

127. The Balkan plateau is a table-land occupying the Balkan peninsula. It constitutes the water-shed between the Black sea and the Aegean sea.

128. The Alpine plateau, a vast table-land occupying the southern part of western Europe, is traversed by the Alps, and sends off many highland branches which connect it with nearly all the mountains of Europe.

129. The Spanish plateau is the western end of the great series of plateaus and mountains, which extend from Bering strait to the strait of Gibraltar. It is a lofty tableland, from 2000 to 3000 feet above sea level, surrounded on all sides by mountainous terraces, and is crossed from east to west by several mountain ridges between which lie river valleys.

130. The Hindu Kush mountains, in northern Afghanistan, west

of the Pamir plateau, border the plateau of Iran on the north.

131. The Sulaiman mountains, in western India, border the plateau of Iran on the east.

132. The Elburz mountains, in northern Persia, border the Caspian sea on the south, and the plateau of Iran on the north.

133. The Zagros mountains, in western Persia, border the plateau of Iran on the south and west.

134. The Caucasus mountains, a lofty and rugged range, form one of the natural boundaries between Europe and Asia. They extend from the Caspian sea, in a northwestern direction to the sea of Azof.

The mineral wealth of the Caucasus is very great, and in this respect the Caucasus are the most noteworthy range in the world. Much of their wealth is as yet undeveloped.

135. The Taurus mountains, in Asiatic Turkey, border the plateau of Asia Minor on the south; they extend parallel to the coast of the Mediterranean. They send off several branches, one of which extends into Syria bordering on the eastern Mediterranean where it is linked with

136. The Lebanon mountains mentioned in Bible history and in the Psalms.

137. The Carpathian mountains, chiefly in Austria Hungary, are rich in minerals, and comprise fertile plateaus and steep slopes covered with forests of pine.

138. The Alps (white, or snow mountains), the highest portion of the great highland of southern Europe, traverse the Alpine plateau. They cover all of Switzerland, a great part of northern Italy, and spread out into the neighboring countries. The great rivers of southern Europe, the Danube, Rhine, Rhone, and Po, rise in the Alps.

The Alps, in most cases, are far back from the edge of the plateau; and the avalanches, which frequently slide down the slopes, usually remain on the plateau, where they form the source of rivers.

What is an avalanche? P. 35, no. 164.

In what does Switzerland resemble Colorado, United States? See p. 100, note.

139. The Apennines, the chief mountain range of Italy, extend in the shape of a bow throughout Italy.

140. The Pyrenees are a lofty mountain range forming the boundary between Spain and France.

They contain numerous mineral springs, both cold and hot, which are frequented by visitors. The Alps and the Pyrenees are snow-capped.

141. The Asiatic zone of deserts extends in a northeasterly direction through Arabia, Persia, and China, ending in the great desert of Gobi.

The desert over which the Israelites traveled after passing through the Red sea, the desert into which Moses led his flocks, and other deserts mentioned in connection with Bible history, were a part of the Arabian desert region, bordering the Red sea. The desert into which David fled from Saul, that in which St. John the Baptist lived, and that in which our Lord was tempted, are desert tracts in the southern part of Palestine.

142. The Kiolen mountains extend in a southwestern direction across the Scandinavian peninsula.

This highland is capped with snow-fields, and in the north sends many glaciers down into the deep fiords which border the Atlantic coast.

143. The Ural mountains traverse the great northern lowland, trending nearly north and south, and form a part of the boundary that separates northern European Russia from northern Asiatic Russia.

For a remarkable series, or belts, of volcanoes, see p. 24, no. 63, a and b.

Noted Peaks of the Eurasian highland west of the Pamir plateau:

144. Mt. Elburz, is the loftiest peak of the Caucasus mountains which form a part of the boundary between Europe and Asia.

145. Mt. Blanc, the highest peak in the Alps, France, is nearly three miles high.

146. Volcano Stromboli is located on an island off the coast of Sicily. It is over three thousand feet high and in constant activity.

This volcano yields sulphur and pumice stone.

It has sometimes been called the "Lighthouse of the Mediterranean Sea."

147. Volcano Vesuvius, in southwestern Italy, is the most famous volcano in the world. It is always quietly active with dangerous eruptions every few years. P. 24, no. 65, a and c.

148. Mt. Etna, on the island of Sicily, is one of the most noted and the largest active volcano in Europe.

149. Mt. Ararat, on the plateau of Asia Minor, in Asiatic Turkey, is noted as the place on which Noah's ark rested after the waters of the deluge had subsided.

150. Mt. Sinai, at the northern end of the Red sea, in Asiatic Turkey, is noted as the mountain from which God gave the ten commandments to the Israelites.

Point out on the map the approximate location of mounts Tabor, Olive, and Calvary.

151. The great northern lowland of Eurasia comprises the vast plain extending from the great highland region to the Arctic ocean.

East of the Caspian sea, this great lowland has a width of nearly twenty-five hundred miles. It is broken only by the low Ural mountains near the center, and sinks below the sea level around the northern part of the Caspian sea. East of the great highland, and partly enclosed by it and its ranges, are a number of detached lowlands.

152. The tundras are the marshy, mossy plains of northern Russia, bordering on the Arctic coast.

They are inhabited by nomadic tribes, who live chiefly on fish and the flesh of reindeer.

153. A vast forest belt, south of the tundras, composed chiefly of cone-bearing evergreens, extends from the gulf of Finland to the Pacific coast, about 4,000 miles.

It is the abode of numerous fur-bearing animals.

154. The Kirghiz steppes extend from the Volga river, to the Caspian sea in the west, to the Altai and Thian Shan mountains in the east, and from the sea of Aral in the south to the head tributaries of the Ob river.

They are rolling prairies, gay with flowers in the spring and green with grass in the summer, and the home of widely spread nomadic people of Russian and

Chinese descent, who raise great numbers of horses and cattle.

155. The plains of Manchuria comprise the rich agricultural and grazing region in the northeastern Chinese Empire, in Manchuria.

156. The plains of China comprise the great flood plains of the Hoang and Yangtse rivers, in eastern Chinese Empire. P. 33, no. 146, d.

157. The plains of Indo-China comprise the low, often-flooded lowland in French Indo-China and Siam.

158. The plains of India, or Hindustan, are located between the Himalaya mountains and the plateau of Dekkan, in Asia. They comprise the fertile lowland, drained by the Ganges and Indus rivers.

159. The plains of Mesopotamia (between the rivers) are located between the plateaus of Iran and Arabia, in Asiatic Turkey. They comprise the fertile basin of the Euphrates and Tigris rivers.

The natural divisions separating Europe from Asia, are the Ural mountains, the Ural river, the Caspian sea, the Causacus mountains, the Black sea, the Bosphorus, the Marmora sea, the Dardanelles, and the Aegean sea.

Europe.

Europe, land of many nations, land of scenic beauty rare,
 Land of commerce, land of culture, with thee no land can compare.
 Here are castles, grand and stately, world-famed shrines, cathedrals old;
 Here is queenly architecture, libraries of wealth untold.
 Unto artists, poets, statesmen, thou hast ever given birth,
 And of all thy noble sisters, none can equal thee in worth!

(The study of Europe is VI. Grade work.)

MATHEMATICAL.

1. Europe is located in the northern part of the Eastern Hemisphere, partly in the north frigid zone, but mainly in the north temperate zone.

It is the only grand division, no part of which lies in the torrid zone.

2. Latitude. The mainland of Europe extends between the parallels of 37° and 72° north latitude, or through (72° - 37°) 65° of latitude.

3. Longitude. Europe extends between the meridians of 10° west and 65° east longitude, or through (10° west and 65° east) 75° of longitude.

What part of Europe does the 40th parallel of latitude cross? Of North America?

4. The countries of Europe in about the same latitude as the United States are:—P. 93, no. 4, a.

5. The area of the main body is nearly four million square miles. (3,753,310.)

Compare with other continents, p. 94, no. 8.

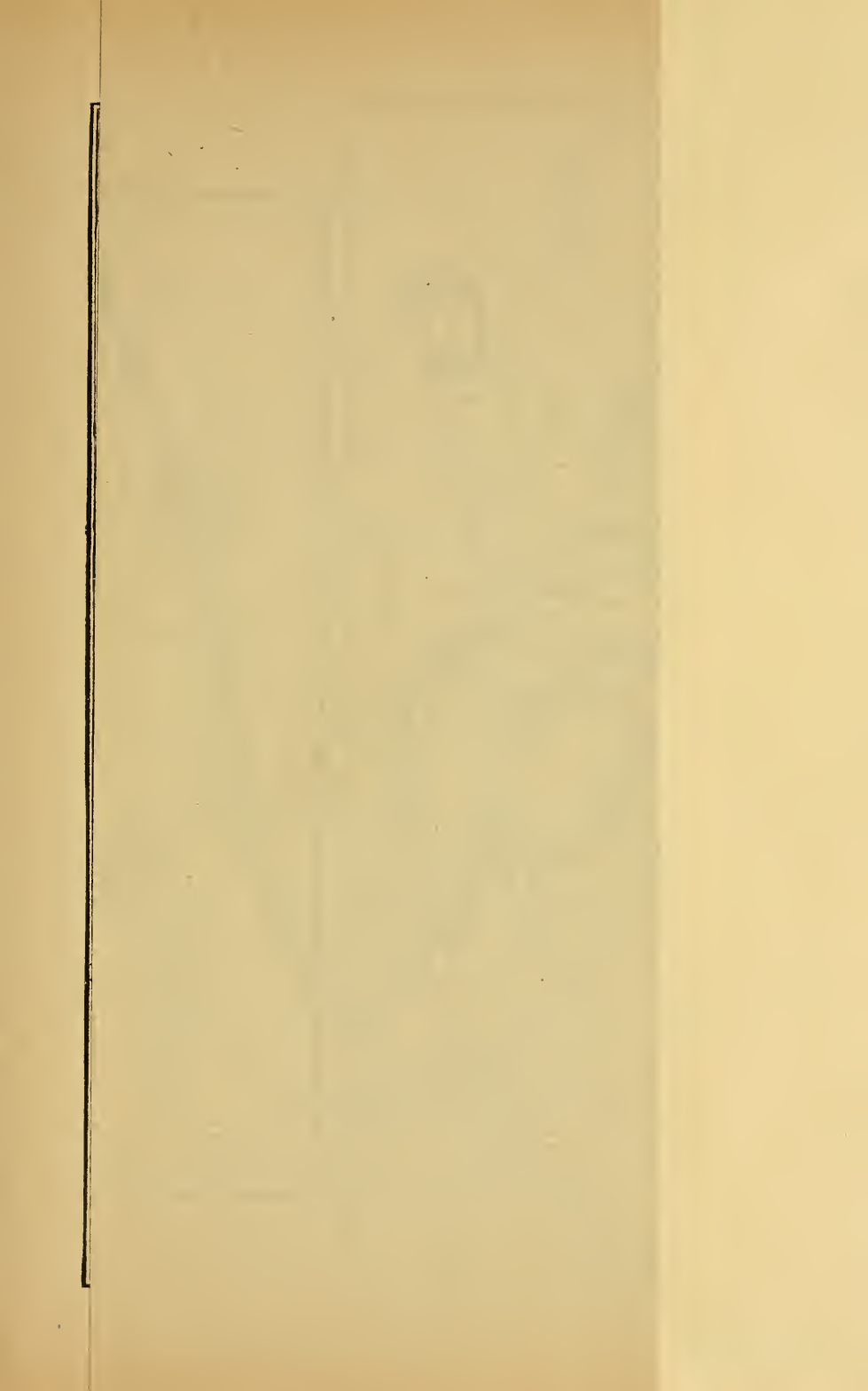
PHYSICAL

6. The coast of Europe is very irregular and has more indentations than any other continent.

Europe may be considered as a great peninsula projecting from Asia and may be called the "peninsula continent."

7. Europe is bounded:

(a) **on the north**, by the Arctic ocean and its arms;





(b) on the east, by the Ural mountains, Ural river, and Caspian sea;

(c) on the south, by the Caucasus mountains, the Black sea, and the Mediterranean sea and its arms;

(d) on the west, by the Atlantic ocean and its arms.

8. Trace and describe the seas, bays, channels and straits of Europe from the Caspian sea to the Kara sea. Pp. 228-230, nos. 31-55.

9. Trace and describe the capes, peninsulas and islands of Europe from the Crimean peninsula to Nova Zembla. Pp 229, 232-235 nos. 38, 72, 73, 75-103.

RELIEF.

10. A line drawn from Hamburg, Germany, to Odessa, Russia, divides the continent into high and low Europe. All east of this line is a low plain, the Valdai Hills in Russia being the highest land (1500 feet). In the north, bordering the Arctic ocean, is a desolate, swampy tract of land, called tundras.

In the southeast are tree-less steppes which are swept by clouds of dust in summer and drifting snow in winter.

The western part of Europe is a network of mountain ranges of which the Alps are the highest.

11. The principal mountain ranges of Europe are:

(a) The Pyrenees, p. 240, no. 140;

(b) the Alps, p. 239, no. 138;

The Alps are known for their lake scenery and glacier-fed rivers.

(c) the Carpathians, p. 239, no. 137;

(d) the Apennines, p. 239, no. 139;

(e) the Caucasus, p. 239, no. 134;

(f) the Balkan, p. 238, no. 127;

(g) the Kiolen, p. 237, no. 142.

The Valdai Hills are in eastern European Russia; the Cevennes are in south central France; the Cantabrians are in northern Spain; the Sierra Nevada and the Sierra Morena are in southern Spain; the Cheviot Hills are between England and Scotland; the Grampian mountains are in central Scotland; the Cambrian mountains are in Wales.

12. The principal mountain peaks of Europe are:

- (a) **Mt. Elburz**, p. 240, no. 144;
- (b) **Mt. Blanc**, p. 240, no. 145;
- (c) **Vol. Vesuvius**, p. 240, no. 147;
- (d) **Vol. Etna**, p. 241, no. 148;
- (e) **Vol. Stromboli**, p. 240, no. 146.

13. The region around the Caspian sea, western Netherlands, and western Belgium are below sea level.

14. The main divide of Europe extends southwestward from the Ural mountains to the strait of Gibraltar.

Begin at about the central part of the Ural mountains and trace a line between the rivers flowing northwest or west, and those flowing southeast or east.

Note that the drainage areas of Europe may be divided into one general north-western and western slope, draining into the Arctic and the Atlantic oceans, or their arms; and a general southeast and eastern slope, draining into the Caspian, Black, and Mediterranean seas.

DRAINAGE.

Rivers of the Southeastern and Eastern Drainage Area.

15. The Ural river rises in the Ural mountains; it flows first south, then west, then south again, and finally empties its waters, through many mouths, into the Caspian sea.

It forms one of the natural boundaries separating European Russia from Asiatic Russia, and is navigable for vessels of considerable size. Its sturgeon fisheries are important.

16. The Volga river, the largest river of Europe (2,200 miles), rises among the marches and small lakes near the Valdai hills. It flows through Russia, at first east, and then in a general southern direction into the Caspian sea by many mouths.

The river is connected with the Caspian, Baltic, Black and White seas, by a system of canals and is navigable almost from its source. Its banks are fertile and often well-timbered. It abounds in fish.

17. The Don river flows south and southwest, through Russia, about 1200 miles, and empties into the sea of Azof, near the town of Azof, by three mouths.

The Don has the most busy trade of southern Russia.

18. The Dnieper River (1230 miles long) rises in western Russia; it flows in a general southeastern course, through Russia, into the Black sea.

19. The Bug river (500 miles long) rises in western Russia, and flows in a southeastern direction into the estuary of the Dnieper on the Black sea.

20. The Dniester river (800 miles long) rises in a lake in the Carpathian mountains in Austria Hungary, and follows a general southeastern course, first through Austria Hungary, then through Russia, into the Black sea.

21. The Danube river (1875 miles long), a famous river of Europe rises in the Schwarzwald, or Black Forest, covering the slopes of the Alpine plateau; it follows a general eastern course through Germany, Austria Hungary, and the Balkan States into the Black sea.

This river has sixty navigable tributaries and forms a water highway to the Hungarian plain.

22. The Po river (400 miles long) rises on the confines of France and Italy, in the Alps, and flows eastward through Italy and an extensive delta into the Adriatic sea.

The valley of the Po is said to be the most fertile in the world. The Po river is well supplied with fish.

23. The Tiber river (260 miles long) rises in the Apennines, central Italy, and flows in a winding southern course, past many noted cities, and through Rome, into the Mediterranean sea.

24. The Rhone river (580 miles long) rises in the Alps, in Switzerland, as a mountain torrent, flows through Lake Geneva, and then proceeds westward, then southward, through France, into the Gulf of Lyons.

A series of magnificent canals connect the Rhone with the Rhine. Thus a ship may sail from the mouth of the Rhone up the Saone, by canal, to the Loire and, by canal, from the Loire to the Seine and, again by canal, from the Seine to the Rhine, and from thence to the North Sea.

25. The Ebro river (500 miles long), a river of Spain, rises in

the Cantabrian mountains and flows southeast into the Mediterranean sea.

Rivers of the Northwest and Western Drainage Area.

26. The Petchora river (1200 miles long) rises in the Ural mountains, and flows in long curves, in a general northern direction, through many mouths into the Arctic ocean.

27. The Dwina river (1000 miles long), formed by the union of two heads tributaries, rises in northern Russia, and flows in a general northwestern direction into the White sea.

28. The Duna river (650 miles long) rises in west central Russia in a small lake near the source of the Volga, and flows in a general northwestern direction into the Gulf of Riga, an arm of the Baltic sea.

29. The Vistula river (650 miles long) rises in the northern Carpathian mountains, in Austria Hungary, then flows by curves; in a general northwestern direction, through western Russia and eastern Germany, into the Baltic sea.

This river flows through the Polish province and is therefore especially important to Poland.

30. The Oder river (500 miles long) rises in northern Austria, Hungary; it follows a general northwestern course through Germany; near its mouth it expands into a lake and then empties its waters into the Baltic sea by three branches.

31. The Elbe river (780 miles long) rises in the mountains of western Austria Hungary, and flows in a general northwestern direction, through Austria Hungary and Germany into the North sea.

32. The Weser river (430 miles long) rises in west central Germany and flows in a general northwestern direction, through Germany, into the North sea.

33. The Rhine river (800 miles long), called "Father Rhine" by the Germans, rises in small lakes, Switzerland, and flows in a general northwestern direction, through Germany and the Netherlands, into the North sea.

The Rhine is distinguished for the beauty of its scenery and the rich fields and vineyards which clothe the banks. It is one of the most picturesque rivers in the world. Scarcely a river of the world is of more importance to more people than the Rhine. It is famous in song and story, lined with great cities and ruined castles of robber barons. It is the Mecca of many tourists during all seasons of the year.

34. The Seine river (500 miles long) rises in western France and flows in a general northwestern direction, through France by a large estuary, into the English channel.

It is noted for its fisheries, its scenery, and for the cities and towns which line its banks.

35. The Loire river (645 miles long) rises in the Cevennes in southern France, and flows by curves, in a general northwestern direction, through France, by an island-studded estuary, into the bay of Biscay.

Dikes have been constructed along its lower course.

36. The Garonne river (400 miles long) rises in the Pyrenees in Spain, and after a subterranean course of about two and one-half miles, it flows in a general northwestern direction, through France, and by an estuary fifty miles long, into the bay of Biscay.

37. The Tagus river (565 miles long) rises in the mountains of northern Spain, and flows in a general western direction nearly along the 40th parallel, through Spain and Portugal, into the Atlantic ocean.

It is the largest river of Spain.

38. The Douro river (500 miles long) rises in the mountains of northern Spain, and flows in a general western direction, through Spain and Portugal, into the Atlantic ocean.

39. The Thames river (217 miles long) rises in southeastern England; it flows in a general eastern direction, and by an estuary, twenty-seven miles wide, into the North sea.

40. The Severn river (200 miles long) rises in central Wales, and then flows in a general eastern and southern direction, into Bristol channel, an arm of the Atlantic ocean.

It is the second largest river of England.

41. The Shannon river (254 miles long) rises in east central Ireland, and flows in a general western direction, through lakes, and by a large estuary, into the Atlantic ocean.

42. The five largest rivers of Europe in order of length are:—

- (a) **The Volga**, p. 245, no. 16.
- (b) **The Danube**, p. 246, no. 21
- (c) **The Dnieper**, p. 246, no. 18.
- (d) **The Don**, p. 244, no. 17.
- (e) **The Petchora**, p. 247, no. 26.

Name in succession the rivers on the northwestern slope; those on the southeastern slope.

Nearly all the rivers of Europe are navigable and much used as commercial highways. Nearly all the rivers of the southeastern slope have been connected by canals, with the rivers of the northwestern slope.

43. Trace a water route by river and canal from the Rhone to the North sea. From the Black sea to the mouth of the Rhine, etc.

LAKES.

Account for the numerous lakes on the British Isles, Scandinavia, and Finland. P. 35, nos. 161, 162.

44. Lakes in the region about the Baltic:

- (a) **The numerous lakes** of Finland are east of the Gulf of Bothnia.
- (b) **Lake Ladoga**, in Russia, east of the gulf of Finland, is the largest fresh-water lake of Europe. P. 36, no. 3
- (c) **Lake Omega**, northwest of lake Ladoga, is the second largest of Europe.
- (d) **Lakes Wenner and Wetter**, in southern Scandinavia, are the largest lakes of Sweden.
- (e) **The lakes of the British Isles** are numerous. They are small, but noted for their beauty.

These lakes surround the Baltic sea and its arms in the same manner as the North American lakes surround the Hudson bay.

45. Over four hundred lakes are located in the region of the Alps. The most noted of these are:—

- (a) **Lake Geneva**, between Switzerland and France.

The river Rhone enters this lake as a muddy stream and leaves it with pure, transparent water. This lake is noted for its picturesque surroundings.

(b) **Lake Constance**, between Switzerland and Germany.

(c) **Lake Lucerne**, in Switzerland, the most beautiful sheet of fresh water in the world.

(d) **The Elton lakes**, between the Ural and Volga rivers, are salt lakes from which thousands of tons of salt are manufactured annually.

CLIMATE.

46. For convenience in study, Europe may be divided into the following three climatic regions:—

(a) **Eastern, or low Europe**, has a colder climate than western, or high Europe. It is exposed to the winds of the Arctic ocean, which sweep over this plain and make the eastern part of the continent colder than the western.

(b) **Western and northwestern Europe** has a mild climate. It is warmed by the winds of the gulf stream; Hammerfest, 70° north, being only a little colder than New York.

The influence of the westerly winds from over the Atlantic is so great, that the cold increases more rapidly eastward than northward and the ports of the Black sea are closed with ice while those of Norway are open.

(c) **Southern Europe** is warmed by the hot winds of the Sahara desert, which gather moisture as they cross the Mediterranean, causing heavy rainfall, and making the climate south of the Alps almost tropical.

ANIMALS.

47. The animals of Europe, both wild and domestic, are in the main the same as those of North America. Instead, however, of the bison, grizzly bear, musk ox, racoon, and prairie dog, peculiar to North America, we find, as characteristic of Europe:

(a) **The reindeer** is used for driving and work in Lapland.

(b) **The chamois** inhabiting the Alps and Pyrenees, resembles a large goat; it is much hunted for its skin, which is dressed into a fine leather.

(c) **The ibex**, a species of wild goat, inhabits the most precipitous

and inaccessible heights of lofty mountains.

(d) **The brown bear** is found in the mountains and forested parts of Europe.

What other wild animals of North America are found in Europe? P. 11, nos. 42 and 43.

47. The birds of Europe are similar to those of North America. Vultures, pheasants, starlings, magpies, and nightingales are peculiar to Europe.

The nightingale is a celebrated song-bird of Europe. The male bird sings, not only during the day, but at night also.

48. The domestic animals, common in North America, are found in nearly all parts of Europe. Great numbers of horses and cattle are raised in the west and in the mountain valleys. Sheep and goats thrive in the east and southeast. The camel is used in the driest parts of southeastern Europe.

49. Immense quantities of food fish are taken from the coast waters and from the seas and rivers of the southeast.

50. The red coral and sponge fisheries of the Mediterranean are of great value.

VEGETATION.

51. For convenience we may divide Europe into the following vegetation regions:

(a) **The extreme northern part** comprises the tundra region which is covered with snow and ice during the greater part of the year. Mosses, lichens, and scanty shrubbery are the only vegetable growths. P. 25, no. 76.

(b) **In northern Europe south** of the tundra region, are forests of pine, fir, and spruce.

(c) **In central Europe**, between the Alps and the Valdai hills, grow the deciduous (shed their leaves) trees, the grains, orchard fruits, and vegetables of the cool temperate zones.

Locate the cool temperate belt around the world. What are the chief productions of this belt? P. 11, no. 42.

(d) **Southern Europe** produces grapes, figs, olives, lemons,

oranges, and other tropical fruits.

Trace the warm temperate belt around the world. What are the principal productions of this belt? P. 11, no. 42. P. 113, note after no 47. P. 114.

MINERALS.

52. Europe possesses abundant stores of those minerals which are of the greatest importance to man.

53. Coal and iron are found abundantly in Great Britain, and are also obtained from France, Belgium, and Germany.

Great Britain ranks next to the United States in the coal and iron production

54. Gold is found to an unimportant extent.

55. Silver is widely spread in small quantities.

The richest silver mines are in Norway, Spain, and in the Hartz mountains and Erzgebirge of south central Germany.

56. Petroleum abounds in the region of the Caucasus mountains, where are the richest petroleum fields in the world.

57. Copper ores are abundant in the Ural mountains, Germany, England, and Spain.

58. Tin ores are found in England, in the Erzgebirge of Germany, and in France.

59. Peat, or black turf, is obtained in Ireland.

What is peat? P. 44, no. 243.

60. Salt is obtained in Great Britain, Russia, Germany, France, and Austria Hungary.

In Germany and Russia, mines of rock salt, some of them very deep, are worked. In the other countries of Europe, salt is obtained by evaporating sea water.

HISTORY AND RELIGION.

61. Europe, though the smallest of the great continents, is the most important. It is distinguished for its flourishing condition of the arts, sciences, industries and commerce and for the superior cultivation of the soil.

Europe was first peopled, and received its early civilization from Asia, the cradle of mankind. The first authentic history begins in Greece about 776 B. C.

From Greece, the European neighbor of Asia, civilization was transmitted by trade and colonization to the countries lying on the shores of the eastern Mediterranean and to southern Italy.

From Italy it spread, with the growth of the Roman Empire, over western and northern Europe.

The Roman Empire, at the time of its greatest extent, comprised all the countries about the Mediterranean, or what were then the civilized nations. It was out of the wreck of the ancient Roman Empire that the modern European nations were formed.

To the Phoenicians, a people inhabiting the country bordering the Mediterranean on the east, we are indebted for our alphabet. From the Phoenician alphabet the Greek was derived; from the Greek, the Roman; and from the Roman, the modern alphabet.

62. The Latin countries of Europe are those that lie west of the Rhine, and the Adriatic sea, and have a sea-coast—Belgium, France, Portugal, Spain, and Italy.

They are called Latin countries because the language spoken in them is derived from the Latin language used by the ancient Romans. From where did the Romans receive their civilization?

63. The Germanic, or Teutonic countries are those situated between the Latin countries and a straight line drawn from the strait of Otranto to North Cape,—Austria Hungary, Switzerland, Netherlands, German Empire, Denmark, Norway, and Sweden, including the British Isles.

They are called Germanic, or Teutonic countries, because the language spoken in them resembles the old German language. The barbarous Teutonic tribes conquered and overran the civilized Latin countries during the so-called "Dark Ages" but in doing so, learned civilization from the conquered people.

64. Great Britain derived its language from two Teutonic tribes, the angles and the Saxons, who settled in the southern part and gave to the country the name Angle-land, or England; and the blended languages became Anglo-Saxon, or nearly English.

The tribes of the Scandinavian and Danish peninsulas were called Northmen and Vikings; they discovered and settled Iceland and Greenland.

65. Slavonic Europe comprises the eastern part of Europe and includes Russia, Bohemia, Poland, and the six Balkan states.

They are called Slavonic Europe because the languages spoken in them are derived from the Slavonic language used by the Slavs, a great tribe that once lived northeast of the Carpathian mountains.

66. Greece was the first European nation to become civilized. It was the home of art and literature, of commerce and good government, long before the rise of Rome. It was successively invaded and conquered by the Romans, Teutons, and finally by the Turks, and was thus sadly reduced, both in wealth and culture.

67. Christianity, like civilization, came from Asia (Palestine) by way of Greece and Rome, through the apostles. Rome to this day is the residence of the Pope, the head of the Catholic church.

The Catholic religion prevails in nearly all the Latin countries.

The Protestant religion prevails in all the Germanic countries, except in Austria, which is still mainly Catholic.

In the Slavonic countries the Greek form of the Christian religion prevails.

The Eastern, or Greek church, was separated from the Roman Catholic church by the Greek schism in 858.

The United Greek Churches or Uniates comprise those churches of Greek rite which are in communion with the See of Rome. These several churches retain their Greek, or Oriental liturgies and sacramental rites.

68. The Catholic population of Europe numbers about 180 million.

PEOPLE.

69. The Population of Europe comprises about 420 million, or one-fourth of the world's population.

It is the most densely and completely populated of all the continents of the world.

70. It is divided among many nations speaking as many different languages. Many of these languages include a number of dialects.

A dialect is a peculiar way of speaking a language.

71. The races of mankind in Europe are:—

(a) **the Caucasian**, or white race, to which belong nearly all the inhabitants;

(b) **the Mongolians**, comprising the Lapps and Finns in the north and the Turks and the southern Hungarians in the south.

INDUSTRIES.

72. In its people, industries, and products, Europe greatly resembles the United States. Explain.

73. The principal industries of Europe are:—

(a) **Agriculture**, in which more than one-half of the people are engaged.

(b) **Herding**.—Where is herding the principle industry?

Hogs fatten upon the acorns and beech nuts in the forests.

(c) **Manufacturing**, carried on most extensively in the United Kingdom and throughout nearly the whole of the western half of Europe.

The chief manufactures are food products, textiles, iron manufactures, leather, glass, porcelain, etc.

(d) **Mining**.—What is mined, and where?

(e) **Commerce** including:

(1) The exportation of chiefly manufactured goods from England, France, Germany, Switzerland, and Belgium, and the products of the soil, forest, and sea, from other countries.

(2) The importation of cotton, wool, and silk for manufactures, and food stuffs.

GOVERNMENT.

74. There are twenty-three independent countries, or states of Europe of which

(a) four are republics—France, Switzerland, San Marino in Italy, and Ardorra in the Pyrenees, Spain;

(b) and nineteen are monarchies.

75. The six great powers of Europe are Great Britain, Germany, France, Austria, Russia, and Italy.

These nations are called the Great Powers because they are the strongest and most populous of the European countries, and have for a long time controlled affairs of continental importance.

COUNTRIES OF EUROPE.

76. Austria Hungary.

(1) **Boundaries.**—N. Germany, Russia; E.—Russia, Roumania; S.—Roumania, Servia, Turkey, Montenegro, Adriatic sea; W.—Italy, Switzerland, German Empire.

(2) **Government.**—Monarchy, consisting of the empire of Austria and the kingdom of Hungary.

Bohemia is a province of Austria Hungary, with the title of kingdom; it is located in the northwestern part and is famed for its colored glass-ware. Prague, formerly the capital, contains one of the oldest universities of the world.

(3) **Capital.**—Vienna, on the Danube river.

(4) **Chief cities.**—Vienna, Buda-Pest.

(5) **Seaport.**—Trieste, on the Adriatic sea.

(6) **Products.**—Wheat, grapes, wine, coal.

(7) **Exports.**—Glass-ware, flax, beet-sugar, beer, hides.

(8) **Imports.**—Coal, silk, raw cotton, copper, kerosene, and machinery.

(9) **The quicksilver mines** of Idria in the southwest are, next to those of Spain, the richest in Europe.

(10) **The mineral waters** of Carlsbad and Toplitz in the northwest are famous.

77.

BELGIUM.

(1) **Boundaries.**—N.—North sea, Netherlands; E.—German Empire, Luxemburg; S. and W.—France.

(2) **Government.**—Kingdom.

(3) **Capital.**—Brussels, on the Senne River.

(4) **Chief cities.**—Brussels, Antwerp, Ostend.

(5) **Seaports.**—Antwerp, Ostend.

Antwerp is an important seaport on the North sea and is the headquarters of the Belgium cod and herring fisheries. P. 86, nos. 174, 175.

(6) **Products.**—Grain coal, iron, zinc.

(7) **Exports.**—Linen, laces, diamonds, gun barrels.

(8) **Imports.**—Food products, naval stores, raw cotton, and petroleum.

Belgium is noted for its enormous foreign trade. It is the most densely populated country of Europe, and one of the greatest European coal and iron producing countries. Brussels carpets were first made here.

78.

BULGARIA.

(1) **Boundaries.**—N.—Roumania; E—Black sea; S.—Turkey; W.—Servia.

(2) **Government.**—It is practically independent, but pays tribute to Turkey.

(3) **Capital—and chief city.** Sophia, in the southwestern part.

(4) **Seaport.**—Varna on the Black sea.

(5) **Products.**—Grain, stock, mulberry trees.

(6) **Exports.**—Wheat and stock.

(7) **Imports.**—Manufactured goods.

79.

DENMARK.

(1) **Boundaries.**—N.—Skagerrack channel; E.—Cattogat channel and Baltic sea; S.—Baltic sea and German Empire; W.—North sea.

(2) **Government.**—Kingdom.

(3) **Capital, chief city, and seaport.**—Copenhagen, on Zealand island.

(4) **Products.**—Dairy products, beef, cattle, horses.

(5) **Exports.**—Dairy products, hides, wool.

(6) **Imports.**—Oil-cake, grain, flour, cotton, kerosene.

The western coast of Denmark is dangerous, and is called by sailors, the "iron coast." To avoid this coast and narrow sound, the Kaiser Wilhelm canal has been constructed. P. 59. No. 24, c.

80.

ENGLAND.

(1) **Boundaries.**—England, including Scotland and Wales, is bounded on the N.—by the Atlantic ocean; E.—North Sea; S.—English Channel; W.—St. George's channel, Irish sea, North channel, Atlantic ocean.

(2) **Government.**—Empire. The United Kingdom of Great Britain and Ireland, including all the foreign possessions, constitutes the British Empire. England includes Scotland and Wales.

The most important British foreign possessions are: (a) Malta and Gibraltar in Europe; (b) British India, Cypress, Ceylon, Hongkong, Straits Settlements and Aden in Asia; (c) numerous colonies in Africa; (d) Australia, Tasmania, New Zealand, Fiji, part of New Guinea and Borneo, and many other Pacific island groups in Australasia; (e) Canada, Newfoundland, British Honduras, Jamaica, the Bahamas, parts of the Lesser Antilles, British Guiana, Trinidad and the Bermudas in America.

(3) **Capital.**—London on the Thames River.

(4) **Chief cities.**—London, Liverpool, Manchester, Birmingham, Leeds.

Birmingham, England, and also Birmingham, Alabama, are noted for their iron industries.

(5) **Seaports.**—London, Liverpool, Manchester.

Manchester is an inland port connected with the sea by the Manchester ship-canal. It is the greatest cotton-manufacturing city in the world.

(6) **Products.**—Iron, coal, tin, agricultural products, horses, cattle, sheep.

(7) **Exports.**—Textiles and steel manufacturers.

(8) **Imports.**—Bread-stuffs, meat, cotton.

Great Britain excels all other countries, except the United States, in the value of her manufactures. It is the foremost country on the globe, and her merchant vessels are equal in number to those of all the other nations combined.

(9) **The English** are leaders in civilization, and are noted for their enterprising trade and their soundness of learning.

(10) **Oxford and Cambridge** are noted for their famous universities, founded in the latter part of the eleventh century by Catholic ecclesiastics and laymen, distinguished for their great learning.

The grand cathedrals, churches, monasteries, and schools, built in ages when the faith was enshrined in the hearts of the people, once merited for England the title of "Daughter of the Church," or "Our Lady's Dower." All the principal buildings erected by Catholic devotion before the time of Henry VIII. have been taken from the control of the church.

The Episcopal church is the established church of England; the Presbyterian, of Scotland.

81.

FRANCE.

(1) **Boundaries.**—N.—English channel, strait of Dover, Belgium; E.—German Empire, Switzerland, Italy; S.—Mediterranean sea, Spain; W.—Bay of Biscay.

(2) **Government.**—Republic.

The most important colonial possessions of France are: (a) Algeria, Tunis, Madagascar, and other colonies of Africa; (b) French Indo-China in Asia; (c) French Guiana, and the islands of Martinique, Guadeloupe and Bartholomew in the New World; (d) New Caledonia, Tahiti and Marquesas islands in Oceania; (e) the island of Corsica, in Europe.

(3) **Capital.**—Paris, on the Seine river.

(4) **Chief cities.**—Paris, Marseilles, Lyons, Bordeaux, Havre, Versailles.

(5) **Seaports.**—Marseilles, Bordeaux, Havre.

(6) **Products.**—Wine, olives, silk, wool.

(7) **Exports.**—Silk, woolen and cotton goods, wines, jewelry, millinery, gloves, and ladies' clothing.

(8) **Imports.**—Cotton, wool, petroleum, meat, and grain.

France ranks next to England and Germany in her foreign and domestic commerce.

(9) **The French people** are very polished and fond of excitement.

They are unsurpassed for thrift and industry and are noted for their culture and earning capacity.

82

GERMAN EMPIRE.

(1) **Boundaries.**—N.—North sea, Denmark, Baltic sea; E.—Russia; S.—Austria Hungary, Switzerland; W.—France, Belgium, Netherlands.

(2) **Government.**—Empire, composed of the federation of a number of states.

Prussia is the largest and most populous of the German states; Saxony is the most densely settled region (not country) of Europe.

The colonial possessions of the German empire are: (a) colonies in Africa; (b) a part of New Guinea; (c) groups of small islands in the Pacific.

(3) **Capital.**—Berlin, in the central part, on the Spree river.

(4) **Chief cities.**—Berlin, Hamburg, Munich, Dresden, Leipsic, Breslau.

(5) **Seaports.**—Hamburg, Bremen, Stettin.

(6) **Products.**—Grain, wine, zinc, and coal.

(7) **Exports.**—Textiles, hardware, chemicals, beet-sugar.

(8) **Imports.**—Provisions, raw material, oil.

Germany has a large growing commerce with all parts of the world. In value, this trade is next to that of the United Kingdom. It ranks first of all countries in the production of zinc.

(9) **The German people** are naturally home-loving, thrifty, ingenuous, and intelligent. We are debted to them for many great inventions, and for scholarly works on the ancient languages, and on chemistry and philosophy. They are noted for their love of music, and some of the greatest composers have been Germans.

83.

GREECE.

(1) **Boundaries.**—N.—Turkey; E.—Aegean sea; S.—Mediterranean sea; W.—Ionian sea.

- (2) **Government.**—Kingdom.
- (3) **Capital.**—Athens, in the southeast, on the gulf of Aegina.
- (4) **Chief cities.**—Athens, Piraeus, Corinth.
- (5) **Seaport.**—Piraeus.
- (6) **Products.**—Figs, olives, currants.
- (7) **Exports.**—Currants, olive oil, sponges, marble, licorice.
- (8) **Imports.**—Cotton, kerosene, machinery.
- (9) P. 228, no. 31; page 233, no. 76; page 253, no. 61.

84.

HOLLAND OR NETHERLANDS.

(1) **Boundaries.**—N.—North sea; E.—German Empire; S.—Belgium; W.—North sea.

(2) **Government.**—Kingdom.

The population of the colonial possessions is about seven times as large as that of the mother country. The colonial possessions include many of the most important of the East India islands, seven of the West Indies, and Dutch Guiana.

(3) **Capital.**—The Hague, on the Zuyder Zee.

(4) **Chief cities.**—Amsterdam, Rotterdam.

(5) **Seaports.**—Amsterdam, Rotterdam.

(6) **Products.**—Linen, paper, dairy products, herring.

(7) **Exports.**—Dairy products, meat, hides, tobacco, linen, herring.

Holland is a sort of dairy farm for Great Britain.

(8) **Imports.**—Naval stores, flour, cotton, meats.

Holland has no coal, iron, or other metals, and little timber and building materials.

Java, one of the East Indies, and the most important of its colonial possessions, is famed for its Java coffee. Banca and Billiton, in the East Indies, supply most of the best tin in the world.

Amsterdam, P. 50, note after no. 286.

Dikes, P. 33, no. 151,b.

(9) **The Dutch** are sober, provident, and thrifty people.

(10) **Luxemburg** was once a part of the Netherlands, but is now

independent by agreement of the powers of Europe. The people generally speak German. The city of Luxemburg is the capital.

85.

IRELAND.

(1) **Boundaries.**—N.—Atlantic ocean; E.—North channel, Irish sea, St. George's channel; S. and W.—Atlantic ocean.

(2) **Government.**—A part of the United Kingdom of Great Britain.

(3) **Capital.**—Dublin, on the Liffey river.

(4) **Chief cities.**—Cork, Dublin, Tara, Belfast, Maynooth.

(5) **Seaports.**—Cork, Dublin, Belfast, Londonderry.

(6) **Products.**—Oats, flax, potatoes, iron, coal, silk, linen.

(7) **Exports.**—Grain, flour, live-stock, salt, meat, linen.

(8) **Imports.**—Woolen and cotton goods, wool, coal, salt.

The Giant's Causeway, which stretches from the northeastern shore of Ireland towards the Scotch coast, is composed of thousands of columns of rock called basalt. The peasants have a legend that the Causeway is a part of a bridge made long ago by giants who tried to build a road-way across the sea to Scotland.

(9) **The Irish** have always been a literary people, fond of song, legend and history. They have clung with lofty tenacity to faith and fatherland. Never in the history of the propagation of the Catholic faith was there found a soil more ready for the reception of the blessed seed of the Gospel than that of Ireland. In the wide expanse of the dominion of the Catholic church, Ireland stands alone as a nation, whose conversion from the darkness of Paganism to the full light of the true faith was accomplished without the shedding of one drop of a martyr's blood.

With all the natural advantages of water for turning machinery and for transportation, and with all her wealth of mineral products, and a location more favorable for commerce than any other large island—the mines of Ireland are practically undeveloped, her waters unused, and the world passes by her excellent harbors.

The laws of the land for the last three hundred years, have not permitted the development of the natural resources.

ITALY.

(1) **Boundaries.**—N.—Switzerland and Austria Hungary; E.—Adriatic and Ionian seas; S.—Mediterranean sea; W.—Mediterranean sea and France.

(2) **Government.**—Kingdom.

It includes the islands of Sicily and Sardinia.

(3) **Capital.**—Rome, on the Tiber river.

(4) **Chief cities.**—Naples, Milan, Rome, Turin.

(5) **Seaports.**—Naples, Venice, Genoa.

(6) **Products.**—Silk, wheat, corn, rice, grapes, olives, figs, lemons, oranges, sulphur.

(7) **Exports.**—Raw silk, velvets, olive oil, wine, fruits, sulphur, marble and macaroni.

(8) **Imports.**—Grain, raw cotton, coal, lumber, wool, tobacco, and kerosene.

Italy is famous for its bright skies, beautiful scenery, public buildings and works of art.

(9) **The people of Italy** are lively and gay and fond of bright colors, out-door amusements, music, and dancing.

MONTENEGRO.

(1) **Boundaries.**—N.—Austria Hungary and Turkey; E.—Turkey; S.—Adriatic sea; W.—Austria Hungary.

(2) **Government.**—Principality, or an independent monarchy, ruled by a prince.

(3) **Capital, chief city and seaport.**—Cetinje.

(4) **Products.**—Grapes, wine, grain, silk.

(5) **Exports.**—Meat-stuffs.

(6) **Imports.**—Manufactures.

88.

NORWAY

(1) **Boundaries.**—N.—Arctic ocean; E.—Russia, Sweden; S.—Skagerrack channel; W.—Atlantic ocean.

(2) **Government.**—Kingdom.

(3) **Capital.**—Christiania, on the Skagerrack channel.

(4) **Chief Cities.**—Christiania, Bergen

(5) **Seaports.**—Hammerfest, Tromso.

(6) **Products.**—Fish lumber, furs, butter, grain.

(7) **Exports.**—Wood pulp, fish.

(8) **Imports.**—Raw cotton, kerosene, flour, and farm tools.

89.

PORTUGAL.

(1) **Boundaries.**—N. and E.—Spain; S. and W.—Atlantic ocean.

(2) **Government.**—Kingdom.

The colonial possessions are: (a) Azores, Madeira, and Cape Verde islands off the western coast of Africa; (b) parts of Africa.

(3) **Capital.**—Lisbon, on the Tagus river

(4) **Chief Cities.**—Lisbon, Oporto.

(5) **Seaports.**—Lisbon, Oporto.

(6) **Products:**—Cork, wine, olive oil, fish.

Portugal yields a larger supply of cork than any other country.

(7) **Exports:**—Wine and Cork.

(8) **Imports.**—Manufactures.

The Inhabitants are much like the Italians and all other people who live in a mild climate and under bright sunny skies.

90.

RUSSIA.

(1) **Boundaries.**—N.—Norway, Arctic ocean and its arms; E. Asiatic Russia, Caspian sea; S.—Caucasia, Black and Azof seas;

W.—Roumania, Austria Hungary, German Empire, Baltic sea and its arms, Sweden.

(2) **Government.**—Empire.

(3) **Capital.**—St Petersburg, on the Neva river.

(4) **Chief Cities.**—St. Petersburg, Moscow, Warsaw, Odessa, Riga.

(5) **Seaports.**—St. Petersburg, Odessa, Riga.

(6) **Products.**—Grain, horses, cattle, wool.

(7) **Exports.**—Wheat barley, lumber, flax and flax seed; wool, hemp, petroleum, furs, and iron.

(8) **Imports.**—Raw cotton, copper, farm machinery,

Russia ranks third among the cotton manufacturing nations. Its exports of grain go to the western, thickly-settled countries of Europe. The foreign commerce of Russia is chiefly with Germany.

(9) **Lapland** comprises parts of Sweden, Norway, and Russia, It is occupied by the Lapps.

(10) **Poland** is an extensive territory of central Europe which existed for many centuries as an independent and powerful state; but having been fallen a prey to internal dissensions was violently seized by Austria, Prussia, and Russia, and divided among these three powers. The Poles like the Russians are a Slavonic race. The Polish language is remarkable for its richness, power, and harmony.

The population of Poland is nearly 8 million, over 70 per cent. of whom were Roman Catholics.

91.

ROUMANIA.

(1) **Boundaries.**—N.—Austria Hungary and Russia; E.—Russia, Black sea; S.—Bulgaria; W.—Servia, Austria Hungary.

(2) **Government.**—Kingdom.

(3) **Capital.**—Bukharest, in the central part.

- (4) **Chief Cities.**—Bukharest, Jassy.
- (5) **Products.**—Grain, grapes, timber, cattle, hogs.
- (6) **Exports.**—Hogs, grain, cattle, wine.
- (7) **Imports.**—Manufactures.

92.

SCOTLAND.

- (1) **Boundaries.**—N. and E.—Atlantic ocean; S.—England; W.—North channel, Atlantic ocean.
- (2) **Government.**—A part of the United Kingdom.
- (3) **Capital.**—Edinburgh, on the Firth of Forth.
A firth is the mouth, or the estuary of a river.
- (4) **Chief Cities.**—Glasgow, Edinburgh, Aberdeen, Dundee.
- (5) **Seaports.**—Glasgow, Aberdeen.
- (6) **Products.**—Wheat, oats, potatoes, tin, coal, cattle, sheep.
- (7) **Exports.**—Textiles.
- (8) **Imports.**—Bread-stuffs, meat, cotton.

93.

SPAIN.

- (1) **Boundaries.**—N.—bay of Biscay, France; E. and S.—Mediterranean sea, strait of Gibraltar, Atlantic ocean; W.—Portugal, Atlantic ocean.
- (2) **Government.**—Kingdom.
Colonial possessions: (a) Canary islands, off the west African coast; (b) islands and parts of the west African coast.
- (3) **Capital.**—Madrid, in the central part.
- (4) **Chief Cities.**—Madrid, Barcelona.
- (5) **Seaports.**—Barcelona, Malaga.
- (6) **Products.**—Lead, quicksilver, cork, grain, esparto, olives, grapes, and other fruits.

(7) **Exports.**—Ores, wine, oranges, olive oil, raisins, nuts, grapes.

(8) **Imports.**—Cotton, tobacco, lumber, oil.

The inhabitants possess the characteristics common to people living in warm, sunny climates.

94.

SWEDEN.

(1) **Boundaries.**—N.—Norway; E.—Russia, Baltic sea; W.—Cattagat, Skagerrack, Norway.

(2) **Government.**—Kingdom.

(3) **Capital.**—Stockholm, on Malar lake.

(4) **Chief Cities.**—Stockholm, Gottenborg.

(5) **Seaport.**—Stockholm.

(6) **Products.**—Iron, lumber, furs, wool.

(7) **Exports.**—Iron, wood pulp.

(8) **Imports.**—Raw cotton, kerosene, farm tools.

95.

SERVIA.

(1) **Boundaries.**—N.—Austria Hungary; E.—Roumania, Bulgaria; S.—Turkey; W.—Austria Hungary.

The Danube river bounds it on the north.

(2) **Government.**—Kingdom.

(3) **Capital.**—Belgrade, on the Danube River.

(4) **Chief City.**—Belgrade.

(5) **Products.**—Grapes, wine, grain, silk, hogs.

(6) **Exports.**—Hogs, wheat, corn, wine.

(7) **Imports.**—Manufactures.

Servia is a country of farmers. The poorest own land, and poverty is rare.

96.

SWITZERLAND.

(1) **Boundaries.**—N.—German Empire; E.—Austria Hungary;

S.—Italy; W.—France.

(2) **Government.**—Republic.

(2) **Capital.**—Berne, on the Aar river.

(4) **Chief cities.**—Berne, Zurich, Basel.

(5) **Products.**—Dairy products, cotton and silk goods.

(6) **Exports.**—Watches, cotton and silk goods, musical instruments, dairy products, toys.

(7) **Imports.**—Breadstuffs, cotton, silk, minerals, coal.

Switzerland is a great manufacturing country. Swiss muslins are sold all over the world. Her trade is mainly with her neighbors. The Swiss are an industrious and liberty-loving people.

97.

TURKEY.

(1) **Boundaries.**—N.—Servia, Bulgaria; E.—Black sea; S.—the Bosphorus, sea of Marmora, the Dardanells, Aegean sea, Greece; W.—Ionian sea, strait of Otranto, Adriatic sea, Montenegro and Austria Hungary.

(2) **Government.**—Empire,—limited monarchy.

(3) **Capital.**—Constantinople, on the Bosphorus.

(4) **Chief cities.**—Constantinople, Saloniki, Adrianople,

(5) **Seaports.**—Constantinople, Saloniki.

(6) **Products.**—Olive oil, wine, rice, minerals, silk, wool, grain, tobacco.

(7) **Exports.**—Silk, wool, carpets, grain, tobacco, valonia (acorn cups for tanning), meats, and cotton.

(8) **Imports.**—Meats, cotton, steel, leather.

The Turkish, or Ottoman Empire, occupies parts of Europe, Asia and Africa.

Turkey is rich in minerals, forests, fisheries, and farming lands, but a poor government depresses all its industrial pursuits.

SMALL COUNTRIES OF EUROPE.

98. Andorra,—situated high up among the Pyrenees in Spain, has maintained its independence for centuries.

Its inhabitants are a sturdy race of peasants. Its area is about 175 square miles, and its population about six thousand.

99. Monaco,—situated on a high rock in the extreme southeast of France, is an independent principality. Monaco is the capital.

Monaco is noted for its gambling houses. The little country of Monaco has been independent about a thousand years. It is among the other countries what Tom Thumb was among men.

100. San Marino,—on the Apennine mountains in Italy, is a picturesque little republic, the smallest in the world.

Its area is about 32 square miles and its population about eight thousand.

SEAPORTS—EXPORTS—IMPORTS.

101. Odessa,—southern Russia, on the Black Sea, is a flourishing modern city. It exports p. 264, no. 90. It imports p. 264 no. 90.

It is the great wheat-shipping port of Russia.

102. Constantinople,—is beautifully located on the Golden Horn (p. 229, no. 36) where the Bosphorus strait opens into the Marmora sea. Its situation commands the shores of both Europe and Asia, and the trade of the Mediterranean and Black seas, hence it is sometimes called the "Key of the East." It was founded by Constantine the Great, 328 A. D. It exports p. 260, no. 83. It imports p. 260, no. 83.

103. Saloniki,—southern Turkey, on the Aegean sea, ranks second in importance and is a noted port of Turkey. It exports p. 260, no. 83.

104. Athens.—southeastern Greece, on the Mediterranean sea, is a growing commercial city. It exports p. 260, no. 83. It imports p. 260, no. 83.

It is famous for its history, and its splendid ruins, which are still the wonder of the whole world. The most noted of these ruins is the temple of Parthenon, located on a fortified rock, called the Acropolis.

105. Trieste, southwestern Austria Hungary, on the Adriatic

sea, is the only important seaport of the empire. It exports p. 256, no. 76. It imports p. 256, no. 76.

106. Venice,—located on seventy-two small islands south of northern Italy in the Adriatic sea, is sometimes called the “Bride of the Sea.” It exports p. 263, no. 86. It imports p. 263, no. 86.

107. Naples,—southwestern Italy, on the Mediterranean sea, is the largest city of Italy. It exports p. 263, no. 86. It imports p. 263 no. 86.

Near Naples stood the cities Herculaneum and Pompeii. P. 24, no. 65, a.

108. Genoa, in the southern part of northern Italy, on the Mediterranean sea, is the leading seaport of Italy. It exports p. 263, no. 86. It imports p. 263, no. 86.

It is famous as the birthplace of Columbus.

109. Marseilles,—southern France, on the Mediterranean sea, is the largest seaport town in France, and the largest on the Mediterranean sea. It exports p. 259, no. 81. It imports p. 259, no. 81.

Its docks are among the finest in the world.

110. Barcelona,—southern part of northern Spain, on the Mediterranean sea, is the second largest city of Spain, and its chief commercial center. It exports p. 266, no. 93. It imports p. 266, no. 93.

111. Malaga,—southern Spain on the Mediterranean sea, is the second seaport of Spain. It exports p. 266, no. 93. It imports p. 266, no. 93.

112. Lisbon and Oporto,—western Portugal, on the Atlantic, are commercial cities. They export p. 264, no. 89. They import p. 264, no. 89.

Lisbon was the native home of the wife of Columbus. Oporto is chiefly known for its port wine.

113. Bordeaux,—western France, at the mouth of the Garonne river, on the Bay of Biscay, is the leading wine shipping city of Europe. It exports p. 259, no. 81. It imports p. 259, no. 81.

114. London,—southeastern England, on both banks of the

Thames, fifty miles from its mouth, is the largest city and financial center of the world. It exports p. 258, no. 80. It imports p. 258 no. 80.

Its imports exceed largely its exports. It is noted for its many famous buildings. See "Miscellaneous " p.274, nos. 143, 144. Its area is nearly twice that of the District of Columbia, and its population is nearly 7 million.

115. Liverpool,—on the Mersey river estuary and **Manchester**,—connected by canal with the Mersey river, both in western England on the Irish sea, are great cotton markets of Europe. They export p. 258, no. 80. They import p. 258, no. 80.

Liverpool ranks next to London in commerce, and is, next to London and Glasgow, the largest city of the United Kingdom.

116. Glasgow,—western Scotland, on the Clyde river estuary, is the second city of the kingdom in size, and the third in importance as a seaport. It exports p. 266, no. 92. It imports p. 266, no. 92.

Glasgow exceeds all other cities in ship-building, and is the great center of Scottish trade and manufacture.

117. Belfast,—northeastern Ireland, on the North channel; **Dublin**,—east-central Ireland, at the mouth of the Liffey river; and **Queenstown**,—the port of Cork, are the leading seaports of Ireland. They export p. 262, no. 85. They import p. 262, no. 85.

Dublin is the metropolis of Ireland and the seat of a celebrated university. Belfast manufactures more linen goods than any other city in the world.

118. Antwerp,—northeastern Belgium, on the North sea, is the only large seaport of Belgium. It exports p. 256, no. 77. It imports p. 256, no. 77.

119. Amsterdam,—northern Holland, on the Zuyder Zee, an arm of the North sea, is situated on ninety islands, and is the largest and most important city of the country. It exports p. 261, no. 84. It imports p. 261, no. 84.

120. Rotterdam,—northern Holland, on the North sea, is next to Amsterdam in size. It is the chief port of the country and one of the important seaports of the world. It exports p. 261, no. 84. It imports p. 261, no. 84.

121. Bremen,—northwestern Germany on the Weser, is second to Hamburg as a maritime city. It exportsp. 260, no. 82. It imports p. 260, no. 82.

122. Hamburg,—northwestern Germany, some miles up the Elbe river, is the second port of the continent, and the second German city in size. It exports p. 260, no. 82. It imports p. 260, no. 82.

Hamburg and Bremen are the two cities of Germany from which most of the emigrants leave their native country to come to the United States.

123. St. Petersburg,—western Russia, situated near the mouth of the Neva river, is connected by a ship canal with the Gulf of Finland. It is the western terminus of the great railroad across the continent. It exports p. 264, no. 90. It imports p. 264, no. 90.

The city was built by, and named after Peter the Great. It is built in a swamp, and to save it from sinking into the ground, it is built on piles driven to great depths. So great was the suffering endured by those who laid the foundation of the city, that 100,000 lost their lives. It is frequently spoken of as the "Paris of the North," on account of its magnificent streets, majestic buildings and the gayety of its people.

124. Riga,—western Europe, on the Baltic sea, is an important northern seaport of Europe. It exports p. 264, no. 90. It imports p. 264, no. 90.

125. Stockholm,—eastern Sweden, is built on a number of islands in the Baltic Sea. It exports p. 267, no. 94. It imports p. 267, no. 94.

126. Gottenborg,—western Sweden, on the Cattegat, and **Christiania**,—southern Norway, on the Skagerrack, are trading centers. They export p. 267, no. 94. They import p. 267, no. 94.

127. Hammerfest,—northern Norway, on the Arctic ocean, is the most northern port of the world open to navigation. P. 13, no. 52. It exports chiefly fish. It imports breadstuffs and manufactured goods.

The Ten Largest Cities of Europe in order of Population.

128. London,—(6,907,756) p. 270, no. 114.

129. Paris (2,714,068), in northern France, is situated on both sides of the Seine. It is the capital of France and is a center of

wealth, art, science and fashion. It is, next to London, the largest city in the world.

It is on the same parallel of latitude as the northern boundary of the United States and the mouth of the St. Lawrence river.

130. Berlin—(1,884,848), central Germany on the Spree river, is the capital of Prussia and all Germany. It is noted for its extensive manufactures and commerce, and its excellent university and other educational institutions.

131. Vienna (1,674,957), northwestern Austria Hungary on the Danube river, is the capital and metropolis of the empire. It is a great center of traffic and one of the most beautiful cities of the world.

132. St. Petersburg (1,313,300), p. 272, no. 123.

133. Constantinople (1,125,000), p. 269, no. 102.

134. Moscow (1,092,360), central Russia, the former capital of Russia, is the winter residence of the royal family. It is a manufacturing center, and is celebrated for the citadel (fortress), called the Kremlin, which includes a cathedral, churches, palaces, forts and barracks.

135. Glasgow (798,357) p. 271, no. 116.

136. Warsaw (756,426), southwestern Russia, on the Vistula, is the chief seat of western trade and manufacture. It was the capital of the former kingdom of Poland.

137. Buda-Pest (732,322), central Austria Hungary, comprises Pest on one side of the Danube, and Buda on the other. They are connected by a magnificent suspension bridge. This city is the chief commercial center of Hungary.

The celebrated crown of St. Stephen, first king of Hungary, is kept here.

MISCELLANEOUS.

138. The population of Europe is about six times as great as that of the main body of the United States.

139. Russia, Sweden, and Norway are the coldest countries of

Europe. Spain and Italy are the warmest.

140. The Danube, Rhine, Rhone, and Po have their sources in the glaciers of the Alps.

141. The Danube flows through Germany, Austria and Roumania.

142. Birmingham, England, manufactures toys in such quantities that the city is called the toyshop of England. **Sheffield**, England, makes the best cutlery in the world.

143. Westminster Abbey, London, England, was originally a monastery. All the sovereigns of England have been crowned here, and to be interred within its walls is considered the greatest honor which the nation can bestow. The interior is rich with splendid monuments and tombs of the noble dead.

144. The London Tower, England, is a gloomy building on the banks of the Thames; parts of it are almost a thousand years old. It was for years the prison and place of execution for the celebrated criminals and traitors of England.

145. Edinburgh, Scotland, is a noted seat of learning and center of literature and education.

146. Dublin, Ireland, has been an educational center for hundreds of years.

147. Armagh, Ireland, is noted for being the place where St. Patrick established his episcopal see.

148. Granada, southern Spain, contains the Alhambra, which is among the first of the splendid monuments of the past. It is a great fortress crowning an eminence of the city; formerly it was the palace of the Moorish kings and was called the "Red Castle." Washington Irving visited Granada, and wrote a delightful book about the Alhambra, and one of its windows is named after him. The Alhambra is kept in preservation as a work of art.

149. Madrid, Spain, is noted for its library, university and museum of art.

150. **St. Etienne**, France, is celebrated for its fire arms, and contains the largest ribbon factories in the world.

It is surrounded by coal fields, and is sometimes called the "Pittsburg of France."

151. **Havre**, northern France, is the port of Paris; it is noted for its great trade with the Americas.

152. **Orleans**, France, is a great historical city, the Key of South France. Here blessed Joan of Arc led the attacks in the great victory of Orleans over the English.

153. **Lyons**, France, is the world's greatest silk market.

154. **Lourdes**, southern France, is noted for the miraculous grotto where the blessed Virgin appeared to the shepherdess, Bernadette. A magnificent church has been erected at the grotto. The place is distinguished for the miraculous cures wrought there. It is annually visited by many thousands of pilgrims and tourists from all parts of the world.

155. **Avignon**, southern France, on the left bank of the Rhone, is noted for its very ancient cathedral and the papal palace. From March, 1309 to September, 1377, seven popes in succession, from Clement V. to Gregory XI., were compelled to dwell in this city.

156. **Cologne**, western Germany, is noted for its cathedral which is one of the grandest examples of Gothic architecture in the world. It was begun 1248 and completed in 1880. It is also noted for its wine and perfume. In this city, cologne, the well-known perfume, was first made.

157. **Strassburg**, southwestern Germany, is celebrated for its fortress and its cathedral, which contains a wonderful clock.

158. Most of our dolls come from **Sonneberg**, Germany.

159. **Munich**, southern Germany, is renowned for its literary institutions and galleries of art.

160. **Switzerland and Servia** are the only countries of Europe that have no sea-coast.

161. The Alps mountains are pierced by three long tunnels: (a) The Mt. Cenis tunnel, seven and three-fourths miles long, from France to Italy; (b) the St. Gothard tunnel, nine and one-fourth miles long, from Switzerland to Italy; (c) the Arlberg tunnel, six and one-half miles long, from Austria to Hungary.

162. Rome, the capital of Italy, is the residence of our Holy Father, the Pope. Rome was founded seven hundred and fifty years before Christ. It was built on seven hills on both sides of the Tiber and is called the "Eternal City."

The present city is noted for:

(a) St. Peter's Dome, the most magnificent cathedral in the world;

(b) the Vatican, the residence of the Pope, containing 4,422 apartments noted for its great library of original manuscript and its large collection of statuary;

(c) the catacombs, where many martyrs were buried and where the early Christians worshipped;

(d) the ruins of the Coliseum, where thousands of the early Christians were put to death;

(e) its museums and galleries, which contain many of the best paintings and other works of art in the world. Rome is the home of art and artists; it is the most famous city of the world.

163. St. Peter's Dome is the most magnificent structure in the world, the construction of which took one hundred seventy-six years. It is six hundred thirteen feet long, two hundred eighty-six feet wide, and four hundred thirty-four feet high. The great artist Michaelangelo was but one of the thirteen architects, who in turn directed the construction of this magnificent dome.

164. Assisi, about forty miles north of Rome, is famous as the birth-place of St. Francis and St. Clare.

165. Pisa, in northeastern Italy, is noted for the Campanile, or Bell Tower, better known as the Leaning Tower of Pisa. It is one hundred seventy-nine feet high and deviates fourteen feet from the perpendicular. Its leaning position is probably due to an earthquake during the building.

166. Brussels, Belgium, is noted for its manufactures of beautiful lace, carpets, and linens.

167. Waterloo, near Brussels in Belgium, is the field where Napoleon was defeated.

168. St. Sophia's at Constantinople, Turkey, was originally a place of Catholic worship, erected by Constantine. The present structure is virtually that enlarged and rebuilt by the Emperor Justinian. Over ten-thousand workmen were employed seven years in its construction and the rich materials used were taken from nearly every celebrated pagan temple in all parts of the kingdom. The emperor thought his church more magnificent than Solomon's temple at Jerusalem, and cried proudly, "Solomon, I have surpassed thee!" When the Turks took Constantinople in 1453, St. Sophia became a mosque.

169. St. Petersburg, Russia, is the most northerly capital city of Europe, and **Athens**, Greece, is the most southerly.

170. European Russia, embraces more than one-half of the area of Europe.

171. The five principal cities of European Russia are:

St. Petersburg, Moscow, Warsaw, Odessa, Cronstadt.

171. Sebastople, on the Crimean peninsula, an old historic city, is a Russian naval port of the Black sea.

It is noted as the chief seat of the Crimean war between Russia and the allied English and French troops. During this war, took place the famous battle distinguished by the heroic charge of the Light Brigade, when, in consequence of a misinterpretation of an order, six hundred cavalry rode headlong against the Russian army to certain death. Tennyson describes this event in his poem, "The Charge of the Light Brigade."

Search Questions.

1. What part of Europe is crossed by the meridian of Greenwich? By the Arctic circle?

2. What meridian is the boundary between the Eastern and the Western hemisphere? What island is crossed by this meridian?

3. What is the most northern cape of Europe?

4. What mountains form the main axis of Europe?

5. For what are the valleys of the Danube and the Po noted?
6. Where is the chief lake region of Europe?
7. What are the productions of the countries along the coast of the Mediterranean sea?
8. What is the most northern town of Europe? Why is it never ice-bound?
9. How does Austria Hungary rank with other countries of the world in the production of corn? Russia and France in the production of wheat? Russia, Germany, and France in the production of oats? Russian Empire, Germany, and Austria Hungary in the production of barley? Germany, Russia, Austria Hungary in the raising of swine? Russia in the raising of sheep?
10. Give the probable cargo and the route of a vessel sailing from Honolulu to Liverpool.
11. Write a letter from one of the following cities, describing its location, sources of wealth, objects of interest: Edinburgh, Venice, Paris, Constantinople.
12. Describe a voyage from Yokohama to Liverpool by way of the Suez canal, and name the cargo and the chief ports passed on the route.
13. Describe a journey in Europe which shall include an account of some of the finest scenery, the most interesting historical associations, and the most important productions and manufactures; or (b) describe a voyage from San Francisco to Melbourne, via Yokohama, Singapore, and Sydney, southeastern Australia, naming other ports touched, the exports of each port, the water passed through, the ocean currents and wind currents encountered and describe some possible adventure of the voyage.
14. Name the leading manufacturing countries of Europe. (Great Britain, Germany, France, Holland and Switzerland.)
15. Which is most northerly country of Europe? The most southerly? The most easterly? The most westerly?

16. Which is the highest country of Europe? The lowest? Which has the longest written history? Which is the most densely populated? Which is the most sparsely populated? Which has the greatest foreign commerce? What river (a) rises in a glacier? (b) Has many ruins of castles on its banks? (c) Flows through Paris? (d) Flows through London? (e) Flows between Scotland and England? (f) Is sacred to the Hindus? (g) Forms a part of the boundary between Europe and Asia? (h) Is in northern Italy? (i) Rises in the Valdai Hills? (j) Flows into the Persian gulf?

Asia.

Spreading out in vast proportions to the north, south, east and west,
 This great continent surpasses in her vastness all the rest.
 Here we find the highest mountains, here too are the broadest plains,
 Here we see in monsoon regions driest winds or plenteous rains.
 Here Arabia is the hottest, coldest are Siberian wilds,
 Here are India's lands the wettest, elsewhere is the climate mild.
 Here was rocked mankind's first cradle, here we find the Holy Land,
 With its scenes sublime and sacred, with its stories old and grand.

(The study of Asia is VI. Grade work.)

MATHEMATICAL.

1. Asia, the largest of the continents, is more than twice the size of North America. It includes more than one-third of the land of the world, and more than one-half of the people.

2. Asia lies entirely in the northern hemisphere. Like North America, it is situated in three zones—the north frigid, north temperate, and torrid zones.

Its southern point extends to within ninety miles of the equator and its northern coast lies half-way between the Arctic circle and the north pole.

3. Latitude. The mainland of Asia extends between the parallels of 2° N. and 77° N. or through (77° – 2°) 75° of latitude.

What part of Asia is crossed by the 40th parallel north?

4. Longitude. Asia lies between the meridians of 26° east and 170° west, or through (180° – 26° –|– 10°) 164° of longitude.

5. The greatest length of Asia from Bering strait to the strait of Babel Mandeb is about 7,500 miles.

6. The area of the main body is over seventeen million square miles.

PHYSICAL.

7. Its coast-line is very irregular, marked by many indentations.

8. Asia is bounded:

(a) **north**, by the Arctic ocean and its arms;

(b) **east**, by the Pacific ocean and its arms;

(c) **south**, by the Indian ocean and its arms;

(d) **west**, by the Ural mountains, Ural river, Caspian sea, Caucasus mountains, Black sea, and Marmora sea.

9. Trace the bays, seas, channels, and straits of Asia, from Kara sea to the Caspian sea.

10. Trace the capes, peninsulas, and islands of Asia from North East cape to the Crimean peninsula.

From the Indian Ocean across Asia to the Arctic ocean.

RELIEF.

11. The continent of Asia may be divided into the three following great physical regions:

(a) **The peninsulas** comprise the table-lands, low mountains, and well-watered valleys, and river plains.

Describe the plateau of Indo-China; of Dekkan; of Arabia. Describe the plains of India.

(b) **The central region** comprises deserts, plateaus, and mountains. It extends from the Red sea nearly to the Pacific ocean.

Beginning with the Pamir plateau, trace and describe the plateaus, mountain ranges, and deserts extending between the Pamir plateau and the Bering sea.

Next trace and describe the plateaus, mountain ranges, and deserts extending from the Pamir plateau to the Mediterranean sea.

(c) **The great northern plain** comprises the steppes, a vast forest region, and the tundras. It extends from the Altai mountains and the Caspian sea to the Arctic ocean.

Describe the steppes, the forest region, and the tundras.

12. The great central highland, extending from Bering strait to the Mediterranean sea, forms the continental watershed and divides the drainage of Asia into three great drainage slopes.

13. The chief rivers of the northern, or Arctic ocean slope, are the Ob, Yenisei, and the Lena rivers.

The Ob rises in the Altai mountains; the chief branch of the Yenisei, in Lake Baikal; the Lena rises in the Yablonoi mountains. All three traverse Siberia

and empty eventually into the Arctic ocean.

The Ob is the richest, in fish, of all the Siberian rivers. The Yenisei has large traffic by steamer in summer and by sledge in winter.

The Lena is a highway for trade in eastern Siberia.

14. The chief rivers of the eastern, or Pacific slope, are the Amur, the Hoang, the Yangste and the Mekong rivers.

All four rivers rise in the great highland region. The Amur first flows in a general eastern direction between Siberia and China, and then northward, through southeastern Siberia into the sea of Okhotsk, opposite Sakhalin island. It is navigable for more than 2,000 miles and is an important commercial highway.

The Hoang, or Yellow river, flows eastward through the Chinese Empire and empties into the Yellow sea. It is a turbulent river, little used for navigation. It is sometimes called "China's Sorrow" on account of the number of people it has destroyed and sufferings it has caused.

The Yangtze flows eastward through China and empties into the East China sea. It is the great commercial highway of China and is navigable for large vessels 1,200 miles from its mouth. The delta of the Hoang and Yangtze p. 33, no. 146, d.

The Mekong river flows southward into the South China sea.

15. The rivers of the southern, or Indian ocean slope, are the Irawadi, Brahmaputra, Ganges, Indus, Tigris, and Euphrates rivers.

The Irawadi, the Ganges, the Brahmaputra, and the Indus, are large rivers of northern India. Each of these rivers rises in the Himalaya mountains; the Indus flows into the Arabian sea and the other three into the bay of Bengal.

The Ganges is one of the greatest rivers of Asia and the sacred river of the Hindus. Its delta is second in size to that of the Hoang and Yangtze rivers in China.

The Syr and Amu are the largest interior rivers. They rise in the western part of the Pamir plateau and flow into the Aral sea.

LAKES.

16. The lakes of Asia are numerous. Most of them are on high plateaus or arid steppes and have no outlets.

17. The most important salt lakes are the Caspian sea and the Aral sea.

18. The Caspian sea is the largest on the globe. It is more than four times the size of Lake Superior.

It receives the fresh water of the Volga, the largest river of Europe, as well as that of other small streams, but it evaporates so rapidly that its surface is

86 feet below the level of the sea, and its waters are always salt.

19. The Aral sea, in southwestern Asiatic Russia, is called the "sea of islands." It is nearly as large as lake Superior. It was once a part of the Caspian sea, and is situated in the same great depression, or basin.

This great basin of the Aral and Caspian sea was once densely peopled. Here Attila, in the fifth century, raised his armies of Huns, with which he overran all southern Europe, till he ruled from Germany in Europe to China in Asia.

Attila called himself the "Scourge of God." He plundered and devastated all in his path with unparalleled ferocity. He was, however, often restrained by the moral power of the Bishops of France and Italy.

When approaching Rome, Attila was persuaded by Pope Leo the Great to spare the city. Soon after this Attila died.

20. Lake Baikal is the largest fresh water lake of Asia. It is over 400 miles in length and is a valuable highway.

CLIMATE.

21. Continental Asia, like America, has every variety of climate.

(a) **The northern and greater part of Asia** is separated from the warm south by lofty mountain ranges, and the Arctic winds blow over the vast plains, therefore this region is very cold during most of the year.

The coldest place in the northern hemisphere is in 67° N. latitude, north of Yakutsk.

(b) **The climate of the great highlands** is cold and severe. Why? P. 42, no. 229 b.

(c) **Southern Asia** has a tropical climate with intense heat during the greater part of the year.

The annual rainfall is eighty feet, and three feet of rainfall in a day is not infrequent. P. 39, no. 202, e.

(d) **On the eastern borders of the continent** the temperature is modified by the nearness of the ocean, and the climate resembles that of eastern North America.

(e) **Japan** has a maritime climate.

Arabia is generally considered the hottest, Siberia the coldest, and India the wettest country in the world.

ANIMALS.

22. (a) **North of the great highland**, the animals of Asia are similar to those of the corresponding region in Europe:—The bear, wolf, fox, buffalo, wild cattle, and many kinds of deer.

The musk deer, a small, deer-like animal, is found in the highlands of central and eastern Asia. It is hunted for the musk found in a sack or pouch, about the size of a hen's egg. Musk is used almost wholly by perfumers, and the demand is so great that the animals are now comparatively rare.

Fossil ivory is the remains of mammoth, or huge animals, which perished ages ago. It is found all over northern Siberia, and on the islands north of it. Ivory is therefore obtained from four sources:—The elephant, the walrus, the ivory-nut, and the fossil-mammoth.

(b) **Tropical, or southern Asia**, abounds in dangerous and fierce reptiles. The largest animals are the elephant, rhinoceros, tapir, lion, tiger, hyena, and jackal (an animal resembling a wolf).

Poisonous serpents, of which the most dreaded is the cobra of India, abound. Monkeys and birds of brilliant plumage are numerous.

(c) **The domesticated wild animals** used as beasts of burden are elephants, camels, yaks, and buffaloes.

The camel is called the "ship of the desert." The dromedary is a one-humped camel; the bactrian, a two-humped camel.

(d) **Our domestic animals**,—the dog, cat, horse, cow, sheep, goat, hog, and fowl, all originated in Asia, and have spread over the world with mankind.

The turkey is peculiar to North America.

VEGETATION.

23. **Asia** has a widely diversified vegetation. Most of the valuable food plants are native to Asia, and have spread, with mankind, to the other continents.

24. **The continent may be divided** into three zones of vegetation:

(a) **Southern Asia** is covered with dense tropical vegetation. The palm, bamboo, and huge banyan tree are abundant.

Rice, cotton, sugar-cane, flax, jute, hemp, the poppy, and spices are the principal plants cultivated on the plains of southern Asia.

The bamboo is a plant with round, hollow stems, used in manufacturing furniture, baskets, etc.

The banyan is a fig-tree of India, whose branches take roots and become additional trunks.

Jute is a plant resembling hemp; it is used in the manufacture of mats, coarse carpets, etc.

The poppy is a plant from which opium is made.

(b) **Central Asia** produces the plants which thrive best in the temperate zones. Vast forests of pine, oak, maple, birch, etc., grow on the upland terraces of Siberia. The cultivated plants are cereals, tea, and fruits.

(c) **In western Asia**, Mocha coffee, tobacco, figs, dates, and olives grow.

MINERALS.

25. All the precious and useful minerals are found in Asia.

(a) **Gold and platinum** are found in the Ural mountains and in the central plateau.

(b) **Silver** is mined in Siberia.

(c) **Copper and iron** are abundant and widely distributed.

(d) **Tin** is abundant in the Malay peninsula and in the islands of Banca and Billiton, near Sumatra.

These tin regions furnish nearly one-half of the world's supply of tin.

(e) **Petroleum** is found chiefly in the basin of the Caspian sea.

(f) **Quicksilver** is obtained in China and Tibet.

(g) **Diamonds, sapphires, rubies, and emeralds** are obtained from the mines of India.

(h) **The finest pearls** are obtained in the Persian gulf and along the coast of Ceylon.

Coal, iron, and salt abound in various places.

HISTORY.

26. Asia is the oldest known portion of the globe, the cradle of the human race, and the earliest known seat of civilization.

The valleys of southern and eastern Asia were early the homes of peoples who had made considerable progress in civilization. They founded Babylon and Nineveh, two of the most beautiful cities built by man. They founded also the historic empires of

Europe, and from them we get our alphabet, our Arabic numerals and the elements of algebra, astronomy, and physics. Here was begun the forward march of the civilization that is rapidly filling the whole earth. Asia, it is true, at first made rapid progress, but was gradually outstripped by other countries in civilization.

The larger number of the inhabitants of Asia are not as energetic and inventive as are the Europeans. They reverence the old and dislike the new. They are conservative and self-satisfied, hence they have not come in contact with the world at large, nor kept pace with the general progress of modern civilization. The most active countries are Japan, India, and China, and others developed by European countries.

There are comparatively few schools, and the masses of the people are uneducated.

China, nevertheless, because of the density and industry of the population and the vast number of natural resources of the country, may, if the modern means of commerce and transportation be introduced, yet become one of the leading nations of the world.

RELIGION.

27. Asia is not only the cradle of mankind, but also that of all the prominent religions of the world.

The Roman Catholic Church is comparatively small in Asia; still, thanks to the heroic efforts of zealous missionaries, it is firmly established in every Asiatic region, side by side with other widely spread religions. The Catholic population of Asia is over eleven and one-half million.

28. Name and describe the other principal forms of religion in Asia. P. 54.

PEOPLE.

29. The population of Asia contains more than one-half the population of the world—over nine hundred million. The most densely peopled regions in order of population are China, Japan, and India.

30. The races inhabiting Asia are:

- (a) The Caucasians, who inhabit chiefly western Asia and India;
- (b) The Mongolians, who inhabit eastern Asia,—China, Japan,

Tibet, Burma, Siam;— and Turkey in western Asia;

(c) **The Malays**, who occupy the Malay peninsula and the neighboring islands.

31. The leading occupations are:

(a) **Agriculture**, in the warm and moist countries, in the south and southeast.

(b) **Grazing**, on the central plains.

(c) **Hunting and fishing**, in the north and northeast.

(d) **Manufacturing**, chiefly in China and Japan.

(e) **Mining**, see p.285, no. 25.

GOVERNMENT.

32. Asia comprises thirteen independent countries.

(a) **Six Monarchies**:—Turkey, Russia, China, Japan, Persia, and Siam.

(b) **Four countries** controlled by foreign powers:—India, Burma, Straits Settlements, and French Indo-China.

(c) **Three countries** having no fixed form of government:—Arabia, Afghanistan and Baluchistan.

THE COUNTRIES OF ASIA.

From Turkey by Sea to Russia.

33.

TURKEY.

(1) **Position**—Turkey in Asia, borders on the Red, Mediterranean, and Black seas, and the Persian gulf. It includes Asia Minor, Syria, Palestine, Mesopotamia, and large parts of the coast of Arabia.

(2) **Syria**, on the Mediterranean sea, was once the great trade center. It includes Palestine, or the Holy Land, dear to all Christians because of its connection with the life and death of our Lord.

(3) **Government**.—Empire. The ruler is called Sultan and each province is governed by a Pasha.

(4) **Capital**.—Constantinople, on the Bosphorus.

(5) **Cities**.—Smyrna, Damascus and its port, Beirut, and Bagdad.

Damascus, the capital of Syria, is the oldest city in the world. It is spoken of in the Bible as existing 1913 years B. C.

(6) **Seaports.**—Smyrna, Beirut.

(7) **Products.**—Sponges, coral, grapes, figs, olive oil, opium, silk, cotton, grain and tobacco.

34.

ARABIA.

(1) **Position.**—Arabia is situated in the southwestern part of Asia.

(2) **Government.**—It is occupied by nomads, or wandering tribes, that have no responsible government.

(3) **Capital.**—It has no capital. Why?

(4) **Cities.**—Mecca and Aden.

Mecca, in the west, is noted as the birthplace of Mohammed. It is visited yearly by thousands of pilgrims, who go to worship at the shrine of Mohammed. What do we mean when we say that a place is a Mecca?

Medina, the "Prophet's City," contains the tomb of Mohammed.

(5) **Products.**—Camels, horses, coffee, tobacco, dates, and pearls.

In the Persian gulf are the most noted pearl fisheries of the world.

(6) **Mocha** is noted for its famous Mocha coffee.

(7) **Oman**, in the southeast, is an independent state under British protection.

(8) **Masket** is its capital and one of the hottest cities on the earth.

(9) **Aden**, on the gulf of Aden, near the strait of Babel Mandeb, belongs to the British and has been strongly fortified by them. Why? It is sometimes called the "Gibraltar of Asia."

35.

PERSIA.

(1) **Position.**—Persia occupies the western part of the plateau of Iran.

(2) **Government.**—Persia was a monarchy up to 1909; but is now under the joint protection of Great Britain and Russia.

(3) **Capital.**—Teheran, in the northern part.

(4) **Products.**—Carpets, shawls, silk, cotton, opium, fruits, pearls, turquoise.

36. BALUCHISTAN, AFGHANISTAN.

(1) **Position.**—They occupy the eastern part of the Iran plateau.

(2) **Government.**—Unimportant and little known monarchies.

England and Russia are rivals for the control of these countries. Nearly all of Baluchistan is included in the British possession of India.

(3) **Capital.**—Afghanistan, Kabul, in the east; Baluchistan, Khelat.

(4) **Products.**—Cereals, fruit, horses, sheep, goats, camels.

37. BRITISH INDIA.

(1) **Position.**—It occupies the great southern peninsula of Asia, and includes a narrow strip of territory, skirting the coast of the bay of Bengal.

(2) **Government.**—It belongs to the United Kingdom and forms the empire of India, of which the king of the United Kingdom is the emperor.

(3) **Capital.**—Calcutta, on the Ganges river.

(4) **Cities.**—Calcutta, Bombay.

(5) **Products.**—Tea, wheat, jute, rice, cotton, indigo and opium; also pearls, cinnamon bark, coffee, cinchona, cacao and cocoanuts from Ceylon.

(6) **The commerce of India** is very great. It comprises a maritime trade with England and China and a caravan traffic with central and western Asia.

Benares, in the northeast, on the Ganges river, is the most sacred city of the Hindus and their chief city of learning. It contains many hundred Hindu temples.

(7) **Kashmir**, in the north, is noted for the celebrated kashmir shawls, made of the wool of the kashmir goat; also for its floating gardens and its roses.

38.

NEPAL AND BHUTAN.

Position.—Nepal and Bhutan, located on the southern slopes of the Himalaya mountains, are two small independent principalities.

39

INDO-CHINA.

(1) **Position.**—Indo-China or Farther India, forming the south-eastern peninsula of Asia, comprises French Indo-China, Siam, also Burma and Assam in British India, and the Straits Settlements.

(2) **Government.**—

(a) **French Indo-China** comprises Anam, Cambodia, Cochin-China and Tonkin, and is under French control.

Hanoi, in the northeast, is the capital.

(b) **Siam** is an independent native kingdom.

Bangkok, on the gulf of Siam, is the capital and the largest city of the peninsula.

(c) **Straits Settlements**, occupying the lower end of the peninsula, are a part of the British Empire and give the British control of strait of Malacca. Singapore is the capital and Malacca is the principal city.

(d) **Burma and Assam** are the most easterly provinces of India.

Burma is celebrated for its ruby mines.

(3) **Products.**—Rice, indigo, cotton, sugar-cane, and tobacco; mulberry, cinnamon, teak, and taban trees; sago, gums, and spices; ships and tin.

The teak tree is valued for its dark, durable wood used in ship and car building. The taban tree yields a sort of rubber, called gutta-percha. The spices include cinnamon, ginger, pepper, nutmegs, cloves, etc.

40.

THE CHINESE EMPIRE.

(1) **Position.**—The Chinese Empire comprises the eastern part of Asia; it includes China with its dependencies, Manchuria, Mongolia, Tibet, and Chinese Turkestan.

It is larger than the entire continent of Europe. Its population, which is

nearly 400 million, is about one-fourth that of the entire globe. The people are chiefly Mongolian.

(2) **Government.**—A monarchy in which the emperor chooses his successor from his own family.

(3) **Capital.**—Pekin, about one hundred miles from the sea, on the gulf of Pechili, is the capital and Tientsin, its port.

Mukden, in the northeast, is the capital of Manchuria.

Mongolia, inhabited by nomadic, or wandering tribes, has no capital.

Lassa is the capital of Tibet.

Chinese Turkestan has no capital.

(4) **Cities in order of their population:** Pekin (1,000,000), Canton, Hankau, Tientsin, Hang Chan, Fuchan, Shanghai, Suchan, Chung King, Hongkong, Ningpo.

There are more large cities in China than in any other country in the world.

(5) **Seaports.**—Shanghai, Canton, Hongkong.

Hongkong is an island southeast of the mainland of China, ceded to Great Britain in 1842. It is a strong military station and the center of British trade in China. Victoria is the most important city.

(6) **Products.**—Tea, silk, rice, millet, cotton, sugar-cane, porcelain, coal, iron, salt, gold, silver, copper, quicksilver, lead, zinc, precious stones, and drugs.

Rice and millet (a cereal resembling rice) are the chief articles of food.

(7) **The Chinese** are noted for their industry, patience, economy, and ingenuity. To them we owe the invention of gunpowder and the mariner's compass.

They show great skill in the carving of ivory and have known the art of paper-making, printing, and the manufacturing of china-ware and metal-ware for ages.

(8) **The most noted public works of China are:**

(a) **The Great Wall**, 1200 miles long was built over two hundred years B. C., to keep out the tartars who inhabited Mongolia and

Manchuria and were then the enemies of China.

(b) **The Grand Canal**, 700 miles long, connecting the Yangtze and the Hoang rivers, was built over a thousand years ago.

(9) **Historical notes**.—China is called Cathay, Middle Kingdom, Flowery Land, and the Celestial Empire. Its records extend back to the time of Abraham, about two thousand years B. C.

Formerly the Chinese and Japanese refused Americans, English, and other foreigners admission to their countries, but now they trade freely with them.

Commodore Perry visited Japan and made a treaty between that government and the United States.

41. KOREA.

(1) **Position**.—Korea occupies the peninsula between the Japan and Yellow seas.

(2) **Government**.—It is governed by Japan.

(3) **Capital**.—Seoul.

(4) **Seaport**.—Chemulpo, on the Yellow sea.

(5) **Products**.—Cereals, tobacco, rice, gold, copper, iron.

42. JAPANESE EMPIRE.

(1) **Position**.—The Japanese Empire, or Sunrise Kingdom, comprises a chain of about four thousand islands. This island empire is situated in the Pacific ocean off the eastern coast of Asia in about the same latitude as the United States, and extends in three curves from the peninsula of Kamchatka to the southern end of Formosa.

(2) **Government**.—It is an empire. The emperor is called Mikado.

(3) **Capital**.—Tokyo, on Hondo island, is connected by a railroad with its seaport, Yokohama.

(4) **Cities**.—Tokyo, Kyoto, Osaka, Hakodate, Nagasaki.

(5) **Seaports**.—Yokohama, Hakodate, Nagasaki.

(6) **Products**.—Silk, rice, tea, camphor, copper, cotton goods.

(7) **The Japanese** are the most progressive of the Mongolian

race. They have opened their ports to foreign trade and residence.

They are skilled in the manufacture of silk, porcelain, and paper. They used the art of printing long before it was introduced into Europe.

43. ASIATIC RUSSIA.

(1) **Position.**—Asiatic Russia comprises all of northern Asia and extends from the Black sea to the Pacific ocean.

(2) **Government.**—It is subject to the Czar, and includes Siberia, Transcaucasia and Russian Turkestan. Bokhara and Khiva in the southwest are independent, but pay tribute to the Czar.

(3) **Capitals.**—Of western Siberia, Tobolsk, on the Ob river; of eastern Siberia, Irkutsk.

(4) **Cities.**—Baku, Tiflis, Tashkend, Kokan, Irkutsk, Tobolsk, Tomsk, Omsk.

(5) **Seaports.**—Vladivostok.

(6) **Products.**—Grain, hides, furs, cattle, fish, wool, silk, petroleum.

(7) **The Trans-Siberian railroad** connects St. Petersburg with the Russian possessions on the Pacific coast.

Vladivostok and Port Arthur are important terminal points on the railroad.

The principal cities on this railroad are Vladivostok, Kiakhta, Irkutsk, Tomsk, Omsk and St. Petersburg

SEAPORTS.

44. From Vladivostok by sea to Smyrna.

(1) **Vladivostok**, southeastern Asiatic Russia, is an eastern terminus of the Trans-Siberian railroad. It is the only seaport of Siberia. This port is much used by our country. Much tea is imported at this port to be carried over land to Europe.

Tea carried over land is considered of better quality than that transported by water.

(2) **Port Arthur**, in northeastern China on the Yellow sea, is a Jap-

anese naval station. It is an eastern terminus of the Trans-Siberian railroad.

(3) **Yokohama**, on the island of Hondo, the largest island of the Japanese Empire, is the principal seaport of the empire, and the seaport of Tokyo, the capital and largest city of Asia.

(4) **Shanghai**, at the mouth of the Yangtze river, is the most important seaport of China.

(5) **Canton**, southeastern China, is an important seaport of China.

(6) **Hongkong**, on an island off the southeastern coast of China, is a British port and naval station. It belongs to Great Britain and is the great center of foreign trade.

(7) **Bangkok**, the capital of Siam, in the southern part, about forty miles up the Menam river, is the most important seaport of Siam.

Commerce at Bangkok is somewhat retarded by sand banks in its harbor.

(8) **Singapore**, south of the Malay peninsula, in the Straits Settlements, belongs to Great Britain. Singapore is an important trading station for all nations and a coaling port for vessels plying between Europe and the far east. At this port may be seen ships leaving for all parts of the world. It is a great ship-building center, and is near the largest tin-smelting works in the world.

Most of our spices come from Singapore. The Malay peninsula, with its neighboring islands, furnish nearly one-half of the world's supply of tin.

(9) **Rangoon**, on the Irawadi river, is the capital of Burma, and the chief port of the Irawadi valley. At high tide this port can be reached by ocean-going vessels.

Teak-wood is one of the chief exports of Rangoon. The surrounding country is rich in its forests of teak which, next to mahogany, is the most valuable wood.

(10) **Calcutta**, on the delta of the Ganges, is the capital and largest city of India. It is the chief trade center for the products of the Ganges valley.

(11) **Madras**, in southeastern India on the bay of Bengal, is situated on the rich plains of India.

(12) **Colombo**, on the island of Ceylon, southeast of India, is a coaling port for vessels plying between Europe and the far east by way of the Suez canal. The chief exports are tea, rice, and coconuts.

What precious stones are found near Colombo?

(13) **Bombay**, on an island off the western coast of India, has a fine protected harbor, the best in India. Bombay has recently been brought into close touch with the productive regions of the interior, by the development of railroads over the mountains. It is now the most important seaport of India. Its chief export is cotton.

(14) **Karachi**, at the mouth of the Indus river, is located in the great wheat-producing region of India.

(15) **Maskat**, on the gulf of Oman, is near valuable pearl fisheries. Its chief exports are pearls and dates.

(16) **Aden**, in the southwestern part of Arabia, on the gulf of Aden, is a fortified town belonging to Great Britain. It commands the entrance to the Red sea.

(17) **Java**, on the Mediterranean coast, western Turkey, is a seaport of Jerusalem with which it is connected by railroad.

(18) **Beirut**, on the Mediterranean coast, western Turkey, is the port of Damascus with which it is connected by railroad.

(19) **Smyrna**, on the Mediterranean, western Turkey, is the largest city of Turkey and the chief commercial center. It is the western terminus of the Asiatic caravan trade. Its chief exports are Smyrna rugs and figs.

45. Ten largest cities of Asia in order of population are:

(1) **Tokyo** (1,818,655), Hondo island, is connected by a railroad with its seaport, Yokohama.

It contains the imperial palace, which comprises a large cluster of buildings surrounded by magnificent gardens and enclosed by high walls and ditches.

(2) **Pekin** (1,600,000), situated about one hundred miles from

the gulf of Pechili, is the capital of China and is connected by rail with Tientsin, its port. It is noted for its many Buddhist temples and is surrounded by high walls.

(3) **Calcutta** (1,026,000) p. 293, no. 44, (10).

The religious, educational, and benevolent institutions are numerous. Here are also several Roman Catholic churches and among these a beautiful cathedral.

(4) **Singan** (1,000,000), in the northwestern part of China Proper, on a branch of the Hoang river, was the capital of China during the twelfth century.

(5) **Osaka** (995,945) is located on the island of Hondo, Japan. It is the second largest city of the empire, and is of commercial and industrial importance.

It has been likened to Chicago on account of its progressiveness, to Glasgow for its industry and thrift, and to Venice for its beauty and quaintness. Locate these cities.

(6) **Canton** (900,000), in southeastern China, on the Pearl river, eighty miles from the sea, is the second largest city of the Chinese Empire.

It contains no horses and no wheeled vehicles. Goods are transported on bamboo poles laid across the shoulders of men; while people who can afford it, have themselves carried about in sedans (chairs enclosed and made for the purpose).

(7) **Hankau** (870,000) is situated in southeastern China at the junction of the Yangtze with the Han. Together with Hanyang and Wuchang, it forms the largest center of population in China.

It is famous for its learning, its manufactures of metal and its export of tea.

(8) **Bombay** (776,000) p. 295, no. 13.

(9) **Tientsin** (750,000) eastern China, on the gulf of Pechili, is a great seaport of Peking.

(10) **Shanghai** (620,000), on the East China sea at the mouth of the Yangtze river, has immense commerce.

MISCELLANEOUS.

46. **Agra**, in northern India, is celebrated as having the best specimens of architecture of the country. Its greatest marvel is a Tag Mahal, a splendid Mausoleum, or tomb, of pink sandstone and white marble, surrounded by cypress trees. It was built by one of the emperors as a tomb for his empress and himself.

47. **Delhi**, nearly in the middle of northern India, is a very old city and has such extensive ruins of its ancient grandeur that it has received the title of "Rome in India."

During 1857, the Mogul who held the place of sovereignty under British protection, joined the rebellion of his subjects against the British. In the mutiny and siege that followed, Delhi was reduced to ruins. These ruins cover forty square miles.

48. **Pekin** is the oldest city in China. It is believed to have existed even at the time when the Israelites crossed the Red sea.

49. **Yokohama**, with its fine harbor, is the Liverpool of China.

50. **The Chinese Language** is spoken by the greatest number of people, and the English language is most widely spread.

51. **There are many curious customs** prevalent in China. When two friends meet each shakes hands with himself.

The Chinamen keeps on his hat as a mark of respect. Women never go shopping in China; the merchant carries the goods to the house.

Under no circumstances will the Chinese gentleman ride in the carriage with his wife. Only the very aged men ever think of carrying a cane or a walking stick.

52. **Printing** was invented in China more than four hundred years ago. There are, however, but very few newspapers and not a single school or educational journal is published.

53. **The ruins of Babylon** are situated on the Euphrates. But little is left to mark the site of the once famous Babylon. This city stood on both sides of the river, was in the form of a square, and surrounded by a wall sixty miles in length, three hundred fifty feet high, and eighty-seven feet wide at the top; it was entered

by twenty-five gates on each side. Within were the hanging gardens and the supposed site of the "Tower of Babel."

54. The ruins of Nineveh are situated on the Tigris. The site of this once famous city, the capital of the great Assyrian Empire, was discovered in the present century.

What do you know from your Bible history relating to Nineveh?

55. The Crusades, or "Wars of the Cross," were designed to rescue Palestine or the Holy Sepulchre from the hands of the Turks.

There were at least seven of these crusades, beginning in 1096 and covering a period of almost two hundred years.

The Children's Crusades of 1212 consisted of thousands of children led by Stephen, a shepherd-boy.

This expedition was a failure as well as all the other Crusades, as far as the original object of them was concerned. Much good came from them, however. They united nations, developed commerce, and tended to the introduction of arts and sciences into Europe.

56. Arabia and Persia are famed for their fine horses.

57. Elephants are used as domestic animals in Indo-China. The white elephants, which are very rare, are much honored and are not permitted to work. They are kept in barns, separated from those of the gray ones.

58. The three chief products of China are tea, silk and bamboo.

59. Opium is the dried juice of the poppy. It is used as a medicine in the form of laudanum and morphine. The effect of the frequent use of it, however, is like that of alcohol or brandy. Those who eat or smoke it soon find that they cannot get along without it. They become opium drunkards and it destroys their bodies and minds.

The Chinese are great opium eaters. They import their opium from India, the greatest opium producing country in the world.

60. Our fire-crackers and fire-works were first made by the Chinese or Hindus, Americans began to make fire-crackers only a few years ago, although at the present time they are turned out by the millions. One of our largest factories is in New Jersey.

61. The bamboo, a plant with round, hollow stems, is put to an endless variety of uses. From it is made everything from a pencil-box to a house; buckets, chairs, fish-rods, musical instruments, bird cages, bellows for blowing the fire, fans, measuring cups, chop-sticks, etc. etc.

It was in a bamboo cane that silkworm eggs were smuggled across the Chinese frontiers and brought to Europe by two Persian monks in the sixth century.

62. Camphor is a whitish, granular substance extracted from three kinds of trees of the laural tribe. It is produced in China and Japan, and prepared chiefly on the island of Formosa.

The wood is cut into chips and stilled in water. The rising vapor of camphor is collected and from it is produced our camphor.

63. Attar of Roses is an oil, or perfume, made from roses. One hundred thousand roses yield only about one hundred eighty grains of attar.

Kashmir in India, Damascus in Syria and Teheran in Persia, are celebrated for the manufacture of attar.

64. Lacquer is secured from a tree of the same name by a secretive process. Lacquer-ware is the most beautiful production of Japanese art; it consists of woodwork, finished in a hard, highly polished varnish, and often inlaid with ornaments of gold, silver, bronze, ivory, mother-of-pearl, etc.

65. Frank-incense, or incense, is an odorous gum, or resin, produced by certain trees in both hemispheres. It is used at religious services and exhales aromatic fumes when burned.

66. Sago is the starch obtained from the sago palm. The tree is cut into sections, these are split, and the granules of starch are separated. This starch constitutes our sago-meal, and if granulated our pearl-sago of commerce.

Three trees furnish as much food matter as an acre of wheat.

PALESTINE.

Palestine, thou fair, bright land where our Saviour loved to dwell!
 Ah, how ev'ry scene of thine has its own sweet tale to tell!
 Here was heard the angel-chant which announced the Savior's birth;
 Here He labored, here He suffered for the wayward child of earth.

1. **Name.**—In Holy Scripture, Palestine has several names. The oldest name of this noted land is Canaan, being named after the fourth son of Cham. It is also called the "Promised Land," God having promised the Patriarchs to give it to their descendants. In consideration of its connection with the life of our Lord, we Christians call it the "Holy Land." Usually it is termed Palestine, although the name does not appear in Holy Scripture. The name signifies, the land of the Philistines.

2. **Position.**—Palestine is located in southwestern Asia, comprising the southern portion of Syria. It lies on both sides of the Jordan river and consists of a great table-land which extends through its entire length, and through two narrow strips of lowland.

3. **Boundaries.**—It is bounded on the:

- (a) north, by the mountain ranges of Lebanon;
- (b) east, by Syria;
- (c) south, by the desert of Sinai;
- (d) west, by the Mediterranean sea.

4. **Extent.**—It lies between $31^{\circ} 15'$ and $33^{\circ} 30'$ north latitude, and between $34^{\circ} 30'$ and $36^{\circ} 30'$ east longitude.

5. **Size.**—Palestine is not more than one hundred forty-five miles long with an average width of eighty miles, making its area about equal to the two states of Massachusetts and Connecticut together.

6. **Physical Features.**—The principal physical feature of Palestine are:

- (a) a central plateau with an average height of sixteen hundred feet;
- (b) the Jordan valley and its lakes;
- (c) the maritime plain;
- (d) the plain of Jericho.

7. Mountains.—The mountains are: Sion, Hebron, Olivet, Tabor, and Mt. Calvary, the most note-worthy peak in the world.

Mt. Sion means citadel, or stronghold. It is the traditionary crescent-shaped mountain, overlooking Jerusalem from the east. In all history, there is no mountain more venerable, that has witnessed more important events or served greater and sublimer purposes. One division of it is called Moriah, the mount on which Abraham was about to slay his only son, while another part of it forms Mt. Calvary, on which the Heavenly Father actually sacrificed His only son.

On Sion the royal David built his palace, and here he chose that his remains should repose. Here the Ark of the Covenant was kept before its removal to the New Temple. Here Solomon and his successors reigned in truly regal grandeur.

Jesus loved to tarry here, and here He willed that the cradle of His church should stand, for on Sion stood the far-famed house within whose walls Jesus instituted the adorable Sacrament of the Altar. In this house Jesus frequently appeared to His apostles and disciples after His resurrection, here he strengthened the incredulous Thomas in his faith, and instituted the holy sacrament of penance. In an upper chamber of this house, finally, the Holy Ghost descended upon the apostles.

8. Rivers.—The principal river is the Jordan, called the "River of the Great Plain," It is two hundred miles in length and varies in width from forty-five to one hundred eighty feet, and in depth from three to twelve feet. It empties into the Dead sea, which is situated in the deepest depression of our globe, its surface being about thirteen hundred feet beneath the level of the sea.

9. Lakes.—The only lakes of Palestine are in the valley of the Jordan; they are lake Merom, the sea of Galilee, and the Dead sea.

The sea of Galilee is geographically interesting, because it is a lake of fresh water, whose surface is six hundred fifty feet below the level of the sea. The Dead sea occupies the site of ancient Sodom and Gomorrha. It has no outlet and is so heavily charged with salt that its water is twenty per cent heavier than that of the ocean. Its shores are desolate, and without a single port.

10. Climate.—The climate of Palestine varies. January is the coldest and July the hottest month. The mean average temperature of Jerusalem resembles that of California. Violent thunderstorms occur in winter.

11. Productions.—Palestine, "the land flowing with milk and

honey," would, no doubt, support as great a population as formerly, provided that the same means were used for its cultivation. The productions of Palestine are olives, palms, corn, barley, peas, wheat, potatoes, cotton, flax, grapes, and sugar-cane. Olive oil is a valuable export.

12. Divisions.—After the Israelites had taken possession of Palestine, the land was divided among the twelve tribes, nine and one-half tribes receiving portions west, and two and one-half tribes receiving portions east of the Jordan. The twelve tribes were united under one government up to the year 930 B. C., when the ten northern tribes (Manasses being counted as two tribes) seceded and formed the kingdom of Israel, the three southern tribes forming the kingdom of Juda. The former kingdom was destroyed by the Assyrians, 722 B. C., the latter by the Babylonians, 588 B. C.

During the time of Christ the divisions were as follows: On the west of the Jordan the provinces of Galilee in the north, Samaria in the middle, and Judea in the south; on the east of the Jordan, Perea and Decapolis. The boundaries of the provinces are very uncertain. The present population is 720,000 consisting chiefly of Syrians, Arabs, and Turks.

13. Cities.—The chief cities are: Jerusalem, Jaffa (Joppa), Bethlehem, Nazareth, and Bethany.

(a) **Jerusalem** (abode of peace), is today a total ruin. The dwellings are in a dilapidated condition, and the streets are very irregular. This city witnessed the Passion and Death of our dear Lord. St. Helena, the mother of Constantine, here erected a basilica, inclosing the site of the crucifixion and the Holy Sepulchre.

Jerusalem has been several times destroyed and rebuilt. In the year 70 A. D., the most terrible destruction was caused by the Romans. So many of the inhabitants who attempted to escape, were captured and suspended on crosses around the walls, that one historian says, there was no more space on the walls to place them. The famine was most terrible. After all food that could possibly be secured was consumed, the bark was stripped off the trees and eaten, and it is related that some killed and ate their own children. After a siege of six months the city was reduced to ruins, and the inhabitants who had not perished, were sold as slaves or treated as criminals.

(b) **Java** (Joppa) is a famous ancient city supposed to have

been built by Japhet. It is supported by travelers and pilgrims on their way to Jerusalem.

(c) **Bethlehem** (house of bread) is noted for being the birth-place of Jesus Christ. Here the Emperor Constantine, at the request of his mother, had a church built over the birth-place of our Savior.

(d) **Nazareth**, the most memorable place in Galilee, was the home of the Blessed Virgin and St. Joseph, and here lived our Lord and Savior after His return from Egypt.

(e) **Bethany** is near Mt. Olivet. Here Mary, Martha and Lazarus lived.

Questions for Class Use.

EURASIA. Page 226

Coast. Forms of Land and Water. Relief. Recite stanza.

1. What two continents are comprised in Eurasia? What part of the land area of the globe does it contain? Locate.

What and Where? Page 226.

Bounding Waters. Winds.

1. Arctic. 2. Pacific. 3. Indian. 4. Mediterranean. 5. Atlantic. 6. Bering Strait Current. 7. Japan Current. 8. Monsoon Drift. 9. Trade Winds. 10. Calms of Cancer. 11. Prevailing Westerly Winds.

From Bering Strait to Bering Strait. Page 227.

Seas, Gulfs, Bays, Sounds, and Straits.

12. Bering Strait. 13. Bering sea. 14. Sea of Okhotsk. 15. Sea of Japan. 16. Channel of Tartary. 17. Korea Strait. 18. Yellow Sea. 19. East China sea. 20. South China sea. 21. Gulf of Siam. 22. Strait of Malacca. 23. Bay of Bengal. 24. Arabian sea. 25. Gulf of Oman. 26. Persian gulf. 27. Gulf of Aden. 28. Strait of Babel Mandeb. 29. Red sea. 30. Describe the Suez canal. What are the benefits derived from the use of this canal? 31. Describe the Mediterranean sea. What may it be called? 32. Describe the Aegean sea. 33. Strait of Dardanelles. 34. Sea of Marmora. For what is this sea noted? 35. Describe the Bosphorus. Tell of its importance. 36. Describe the Golden Horn. 37. Black Sea. 38.

Sea of Azof. 39. Strait of Otranto. 40. Strait of Messina. 41. Strait of Gibraltar. 42. Describe the bay of Biscay. 43. St. George's channel. 44. Irish sea. 45. North channel. 46. English channel. 47. Strait of Dover. 48. North sea. 49. Skagerrack. 50. Cattegat. 51. Baltic sea. 52. Gulf of Finland. 53. Gulf of Bothnia. 54. White sea. 55. Kara sea. 56. Gulf of Ob.

From East Cape to East Cape. Page 231.

Peninsulas, Capes, and Islands.

57. East cape. 58. Kamchatka. 59. Sakhalin. 60. Describe Formosa. What circle crosses it? What part of North America does it cross? 61. Japanese islands. What four seas are partly inclosed by these islands? Name the four largest. 62. Describe Korea. It is under the control of what nation? 63. Describe Hongkong. Belongs to what nation? 64. Describe the East Indies. 65. Malay peninsula. 66. Ceylon. 67. Point de Galle. 68. Cape Comorin. 69. Indian peninsula. 70. Arabian peninsula. 71. Isthmus of Suez. 72. Cyprus. 73. Crete. 74. Peninsula of Asia Minor. 75. Balkan peninsula. 76. Grecian peninsula. 77. Describe the isthmus of Corinth. 78. Italian peninsula. 79. Sicily. 80. Malta. 81. Sardinia. 82. Corsica. What noted man was born on Corsica? 83. Describe the Balearic islands. 84. Spanish or Iberian peninsula. 85. St. Vincent. 86. Finisterre. 87. British Isles. 88. Great Britain. 89. Ireland. 90. Land's End. 91. Isle of Man. 92. Channel islands. What noted breeds of cattle are grown on these islands? 93. Describe the Hebrides. 94. Orkney islands. 95. Shetland islands. To what country do these islands belong. 96. Describe the Faroe islands. 97. Danish, or Jutland peninsula. 98. Scandinavian peninsula. 99. The Naze. 100. Lofoden islands. What is the Maelstrom? 101. Describe the North cape. 102. Spitzbergen. 103. Nova Zembla. 104. Franz Josef Land. 105. North East cape. 106. New Siberia. 107. Wrangell.

Relief. Page 235.

Describe the great Eurasian highland. Where is it widest?
From the Pamir plateau to Bering strait and back.

Plateaus, Deserts, Mountains.

108. Describe the Pamir plateau. What may be said about the surface? 109. Describe the Tibet plateau. Which is the highest inhabited region of the world? 110. Describe the plateau of Mongolia. What mountains border on this plateau? 111. Describe the plateau of Turkestan. 112. Gobi. Where is it? 113. Describe and locate the Thian Shan mountains. 114. Altai mountains. 115. Yablonoi mountains. 116. Locate the Stanavoi mountains. 117. Khinghan mountains. 118. Kuenlun mountains. 119. Himalaya mountain peaks. 120. Mt. Everest. 121. Tell about the parallel mountain chains. 122. Plateau of Dekkan.

From the Pamir Plateau to the Strait of Gibraltar. Page 236.

123. Describe the plateau of Iran. What does it include? 124. Describe the plateau of Asia Minor. 125. Plateau of Armenia. 126. Plateau of Arabia. 127. Balkan plateau. 128. Alpine plateau. 129. Spanish plateau. 130. Hindu Kush mountains. 131. Sulaiman mountains. 132. Elburz mountains. 133. Zagros mountains. 134. Caucasus mountains. What may be said as to their mineral wealth? 135. Taurus mountains. 136. Lebanon mountains. 137. Describe the Carpathian mountains. 138. Alps. What can you say about the position of the avalanches? What is an avalanche? In what does Switzerland resemble Colorado, United States? 139. Describe the Apennines. 140. Pyrenees. What do they contain? 141. Describe the Asiatic zone of deserts. Name some events of Bible history which occurred in the Arabian desert. 142. Describe Kiolen mountains. 143. Ural mountains.

Noted Peaks of the Eurasian Highlands West of the Pamir.

Plateaus. Page 238.

144. Mt. Elburz. 145. Mt. Blanc. 146. Volcano Stromboli. What does this volcano yield? What is it sometimes called? 147. Volcano Vesuvius. 148. Mt. Etna. 149. Mt. Ararat. 150. Mt. Sinai. Point out on the map the approximate location of mounts Tabor, Olive, and Calvary. 151. The great northern lowland of Eurasia. What may be said of its width? Of its surface? 152.

Describe the tundras. By whom inhabited? 153. Describe the forest belt. What kind of animals are found there? 154. Locate and describe the Kirghiz steppes. 155. Describe the Plains of Manchuria. 156. Plains of China. 157. Plains of Indo-China. 158. Plains of India. 159. Plains of Mesopotamia. What are the natural divisions separating Europe from Asia?

EUROPE. Page 243.

Mathematical.

Recite poetry.

1. Locate Europe. In what zones does it lie? What are its latitude boundaries? Its longitude boundaries? What part of Europe does the 40th parallel of latitude cross? Of North America? What countries of Europe are in about the same latitude as the United States? What is the area of the main body of Europe? Compare it with other continents.

Physical. Page 243.

6. Describe the coast of Europe. What may Europe be called as to land divisions, and why?

7. What are the natural boundaries of Europe?

8. Trace the seas, bays, channels, and straits of Europe from the Caspian sea to the Kara sea.

9. Trace and describe the capes, peninsulas, and islands of Europe from the Crimean peninsula to Nova Zembla.

Relief. Page 244.

10. Trace a line to mark the continental divide of Europe. Into what drainage areas does this line divide Europe? Describe each area. Discuss the principal mountain ranges of Europe. Mountain peaks. What parts of Europe are below sea level.

14. Locate the main divide of Europe. Begin at about the central part of the Ural mountains and trace a line between the rivers flowing northwest or west, and those flowing southeast or east. How may the drainage areas of Europe be divided?

Drainage. Page 245.

Rivers of the Southeast and Eastern Drainage Area.

15. Describe the Ural river. The Volga. The Don. The Dnieper. The Bug. The Dniester. The Po. The Tiber. The Rhone. The Ebro.

Rivers of the Northwest and Western Drainage Area.

26. Describe the Petchora river. The Dwina. The Duna. The Vistula. The Oder. The Elbe. The Weser. The Rhine. The Seine. The Loire. The Garonne. The Tagus. The Douro. The Thames. The Severn. The Shannon.

Name and describe in order the five largest rivers of Europe. Name in order the rivers on the northwestern slope.

How have the rivers of Europe been made a great commercial importance. Trace a water route by river and canal from the Rhone to the North sea. From the Black sea to the mouth of the Rhine.

Lakes. Page 249.

Account for the numerous lakes on the British Isles. In Scandinavia and Finland.

44. Discuss five lakes in the region about the Baltic sea and compare with the lake region of North America.

Discuss the lakes in the region of the Alps.

Climate. Page 250.

46. Describe the climate of eastern, or low Europe. Of western and northwestern Europe. Of southern Europe.

Animals. Page 250.

47. How do the animals of Europe, both wild and domestic, compare with those of North America? Name the animals peculiar to North America. Discuss the characteristic animals of Europe. The birds of Europe. The domestic animals. Food fish.

Vegetation. Page 251.

51. Discuss the vegetation of the extreme northern part. Of the region south of the tundras. Of central Europe. Locate the cool temperate belt around the world. What are the chief pro-

ductions of this belt? Discuss the vegetation of southern Europe? Trace the warm temperate belt around the world. What are the principal productions of this belt?

Minerals. Page 252.

52. What can be said of the mineral resources of Europe? Speak briefly on gold, silver, petroleum, copper-ores, tin-ores, peat, salt.

History and Religion. Page 252.

61. What may be said of the importance of Europe and for what is it distinguished? By whom was Europe first peopled and from where did it receive its early civilization? Describe the spread of civilization from Greece to Italy, and from Italy over western and northern Europe. What can you say of the Roman Empire? Of the origin of our alphabet?

62. Name and locate the Latin countries. The Germanic countries. From where did Great Britain receive its language and its name.

64. What does Slavonic Europe comprise? What can be said of the early civilization of Greece? From where and by whom was Christianity brought to Europe?

67. What religion prevails in nearly all the Latin Countries? In the Germanic countries? In the Slavonic countries? What can be said of the Eastern or Greek church? What is the Catholic population of Europe?

People. Page 254.

69 What is the population of Europe? What can be said of the density of the population? How is Europe divided? What races of mankind prevail in Europe?

Industries. Page 255.

72. In what does Europe greatly resemble the United States? Explain. Discuss the three principal industries of the people of Europe.

Government. Page 255.

74. Discuss the government of Europe. Name the six great

powers of Europe.

Countries of Europe. Page 256.

76. Austria Hungary: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaport. (6) Products. (7) Exports. (8) Imports. What can be said of the quicksilver mines of Idria? Mineral Waters?

77. Belgium: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. For what is Antwerp noted? (6) Products. (7) Exports. (8) Imports. For what two things is Belgium noted?

78. Bulgaria: (1) Boundaries. (2) Government. (3) Capital and chief cities. (4) Products. (5) Exports. (6) Imports.

79. Denmark: (1) Boundaries. (2) Government. (3) Capital and chief cities. (4) Products. (5) Exports. (6) Imports. What may be said of the western coast of Denmark?

80. England: (1) Boundaries. (2) Government. Name the most important British foreign possessions. (3) Capital. (4) Chief cities. What can be said of Birmingham? (5) Seaports. What can be said of Manchester? (6) Products. (7) Exports. (8) Imports. (9) For what are the English people noted? Oxford and Cambridge? What can be said of the grand cathedrals, churches, and monasteries?

81. France: (1) Boundaries. (2) Government. Name the most important colonial possessions. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports. The French people.

82. German Empire: (1) Boundaries. (2) Government. For what is Prussia noted? Name the principal colonial possessions of the German Empire. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports. The German people.

83. Greece: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Imports. (8) Exports.

84. Holland: (1) Boundaries. (2) Government. Colonial possessions. (3) Capital. (4) Chief cities. (5) Seaports. (6)

Products. (7) Exports. (8) Imports. Where are the chief mineral resources of this country? The Dutch people. (10) Luxemburg.

85. Ireland: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports. The Giants' Causeway. The Irish people.

86. Italy: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports. The people of Italy.

87. Montenegro: (1) Boundaries. (2) Government. (3) Capital. (4) Products. (5) Exports. (6) Imports.

88. Norway: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports (8) Imports.

89. Portugal: (1) Boundaries. (2) Government. Colonial possessions. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products (7) Exports. (8) Imports. Inhabitants.

90. Russia: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports. Russia among the cotton manufacturing nations.

91. Roumania: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Products. (6) Exports. (7) Imports.

92. Scotland: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports.

93 Spain: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaports. (6) Products. (7) Exports. (8) Imports. The inhabitants.

94. Sweden: (1) Boundaries. (2) Government. (3) Capital. (4) Chief cities. (5) Seaport. (6) Products. (7) Exports. (8) Imports.

95. Servia: (1) Boundaries. (2) Government. (3) Capital. (4) Chief city. (5) Products. (6) Exports. (7) Imports. For what is Servia noted?

96. Switzerland: (1) Boundaries. (2) Government. (3) Capital (4) Chief cities. (5) Products. (6) Exports. (7) Imports. For what is Switzerland noted?

Small Countries of Europe. Page 269.

98. Locate Andorra. Government. Its inhabitants.
 99. Monaco, locate. For what noted?
 100. San Marino. Position. Area.

Seaports, Exports, Imports. Page 269.

101. Locate and describe Odessa, Constantinople, Saloniki, Athens, Trieste, Venice, Naples, Genoa, Marseilles, Barcelona, Malaga, Lisbon, Oporto, Bordeaux, London, Liverpool. Glasgow, Belfast, Antwerp, Amsterdam, Hamburg, St. Petersburg, Riga, Gottenborg, Hammerfest.

The Ten Largest Cities of Europe. Page 272.

128. Describe London, Paris, Berlin, Vienna, St. Petersburg, Constantinople, Moscow, Glasgow, Warsaw, Buda-Pest.

Miscellaneous. Page 273.

138. How does the population of Europe compare with that of the United States? Which are the coldest countries of Europe? The warmest? What four rivers have their sources in the glaciers of the Alps? Through what countries does the Danube flow? For what is Birmingham noted? Sheffield?

143. Give a short description of Westminster Abbey. The London Tower. For what is Edinburgh noted? Armagh? Granada? Madrid? St. Etienne? Havre? Lyons? Lourdes? Avignon? Cologne? Strassburg? Sonneburg? Munich? Switzerland? Tell of the three long tunnels piercing the Alps. Describe Rome. St Peter's Dome. Assisi. For what is Pisa noted? Brussels? Waterloo? St. Sophia's? St Petersburg?

170. What part of the land area of Europe does Russia comprise? Name the five principal cities of Russia. For what is Sevastople noted? Answer search questions.

ASIA.**Mathematical.** Page 280.

Recite poem.

1. How does Asia compare with the other continents in size? What part of the land area of the globe does it comprise? Locate Asia.

3. What is the latitude? Longitude? The area?

Physical. Page 280.

7. How is its coast line? Bound Asia.

8. Trace the bays, seas, channels, and straits of Asia from Kara sea to Caspian sea. Trace the capes, peninsulas, and islands of Asia from North East Cape to Crimean peninsula.

Relief. Page 281.

11. Into what three physical regions may the continent of Asia be divided? Describe each. Describe the steppes. The forest region.

12. Trace the great central Highland. Name and describe the chief rivers of the Arctic slope. Of the Pacific slope. Of the Indian ocean slope. What can be said of the lakes of Asia? Name and describe the principal salt lakes of Asia. The largest fresh water lake.

Climate. Page 283.

21. What can be said of the variety of the climate of Asia? How is the climate in the northern part? On the great highlands? In southern Asia? On the eastern borders of the continent? In Japan?

Animals. Page 284.

22. What can be said of the animals north of the great highlands? Of the musk deer? What is fossil ivory? Where found? From what four sources is ivory obtained? What can be said of the animals of southern Asia? Of the domesticated wild animals? Distinguish between the dromedary and the bactrian. What can be said of the domestic animals of Asia?

Vegetation. Page 284.

23. What can be said of the vegetation and food plants of Asia?

Into what three vegetation belts may the continent be divided? Describe the vegetation of southern Asia. Of central Asia. Of western Asia

Minerals. Page 285.

25. What can be said of the minerals of Asia? Where are each of the following found:—gold, platinum, silver, copper, tin, petroleum, quicksilver, diamonds, and other precious stones, pearls?

History. Page 285.

26. Speak briefly on the history of Asia.

Religion. Page 286.

27. What can be said of the religion of Asia? Of the Roman Catholic Church? Name and describe the other principal forms of religion.

People. Page 286.

29. Discuss the population of Asia. Name and locate the different races of mankind inhabiting Asia. What are the leading occupations of the people of Asia.

Government. Page 287.

32. Discuss the government of Asia.

The Countries of Asia. Page 287.

From Turkey by sea to Russia.

33. Turkey: (1) Position. What does it include? (2) What can be said of Syria? (3) Government. (4) Capital. (5) Cities. (6) Seaports. (7) Products.

34. Arabia: (1) Position. (2) Government. (3) Capital. (4) Cities. For what are Mecca and Medina noted? (5) Products. (7) Oman. (8) Maskat. (9) Aden.

35. Persia: (1) Position. (2) Government. (3) Capital. (4) Products.

36. Baluchistan. Afghanistan: (1) Position. (2) Government. (3) Capital. (4) Products.

37. British India: (1) Position. (2) Government. (3) Capital. (4) Cities. (5) Products. (6) Commerce. Benares. (7) Kashmir.

38. Nepal and Bhutan. Where and what?

39. Indo-China. (1) Position. (2) Government of French Indo China, Siam, Straits Settlements, Burma and Assam. For what is Burma noted? (3) Products. Of what value is the teak tree? What is gutta-percha?

40. The Chinese Empire. (1) Position and extent. (2) Government. (3) Capitals. (4) Cities. (5) Seaports. (6) Products. (7) For what are the Chinese noted? (8) Noted public works. (9) Historical notes.

41. Korea. (1) Position. (2) Government. (3) Capital. (4) Cities. (5) Seaports. (6) Products.

42. Japanese Empire. (1) Position. (2) Government. (3) Capital. (4) Cities. (5) Seaports. (6) Products. (7) For what are the Japanese noted?

43. Asiatic Russia. (1) Position. (2) Government. (3) Capitals. (4) Cities. (5) Seaports. (6) Products. (7) What can be said of the Trans-Siberian railroad?

Seaports. Page 293.

44. From Vladivostok by sea to Smyrna.

(1) Vladivostok. (2) Port Arthur. (3) Yokohama. (4) Shanghai. (5) Canton. (6) Hongkong. (7) Bangkok. (8) Singapore. (9) Rangoon. (10) Calcutta. (11) Madras. (12) Colombo. (13) Bombay. (14) Karachi. (15) Maskat. (16) Aden. (17) Jaffa. (18) Beirut. (19) Smyrna.

Ten largest cities of Asia:

45. Locate and describe: Tokyo, Pekin, Calcutta, Singan, Osaka, Canton, Hankou, Bombay, Tientsin, Shanghai.

Miscellaneous. Page 297.

46. For what is Agra noted? Delhi? Pekin? Yokohama? Which language is spoken by the greater number of people and which is most widely spread? How long has the art of printing been in use among the Chinese? Describe briefly the ruins of Babylon. Of Nineveh. What can be said of the Crusades? What two countries are famed for their fine horses? How are elephants

employed in Indo-China? What are the three chief products of China? What is opium? By whom were fire-crackers and fire-arms first made? What is the bamboo? Camphor? Attar of roses? Lacquer? Frank-incense? Sago?

Palestine. Page 300.

Stanza. (1) Name. (2) Position. (3) Boundaries. (4) Extent. (5) Size. (6) Physical features. (7) Mountains. (8) Rivers. (9) Lakes. (10) Climate. (11) Productions. (12) Divisions. (13) Cities.—Java, Bethlehem, Nazareth, Bethany.

POINTS FOR GENERAL REVIEW.

I.—Name the continents in order of size.

II.—Discuss:

1. The islands in each ocean and in the Mediterranean.
2. The capes on each ocean;
3. The peninsulas of each continent;
4. The seas of the globe;
5. The gulfs, bays, and sounds of each continent;
6. The channels and straits in connection with each continent;
7. The relief of each continent;
8. The drainage areas and rivers of each continent;
9. The principal lakes of each continent;
10. The 40th and 45th, the 30th and 35th parallels north latitude;
11. The equator and four principal small circles;
12. The climate of each continent;
13. The animals of each continent;
14. The vegetation of each continent;
15. The minerals of each continent;
16. The exports and imports of each continent;
17. The rank of the countries in each of the leading productions;
18. The largest cities of each continent;
19. The seaports of each continent;
20. The principal cities on the Mississippi;
21. The principal cities on the Great Lakes;
22. The principal seaboard cities of North America;
23. The principal canals and locks of the world;
24. The government and political divisions of each continent;
25. The people of each continent;
26. Religions practiced in each continent.

Examination Questions.

I.

1.—What is latitude? How is it reckoned? What is longitude? How is it reckoned? Give approximately the latitude and longitude of La Crosse.

2.—What relation to longitude has our system of time in the United States? If you were to go directly east from La Crosse around the world, what countries would you cross?

3.—Name the States that touch the Mississippi River, and give their capitals.

4.—Why should a large city have grown up at Minneapolis? At Chicago?

5.—Name and locate by states, ten of the largest cities of the United States.

6.—Select five of the leading agricultural productions of the United States, and locate by states the regions where they are most largely produced.

7.—Do the same with five mineral productions.

8.—Name ten countries of Europe, the capital and at least one other large city of each.

9.—What is climate? What are the two chief factors that determine it? How else may the climate of a place be modified? Give illustration.

10.—Write on the topic, "The Mountains and Rivers of Asia."

II.

1.—How often is the census of the United States taken? Give approximately the population of the U. S. Of Wisconsin. Of La Crosse. What five cities would you put first in the population of the U. S?

2.—Bound Wisconsin; give capital; locate five of the largest cities.

3.—Name and locate the three principal drainage areas of Wisconsin. Name three of the chief streams of the largest drainage area, and one each of the two smaller.

4.—Name ten of the more important rivers that drain the Atlantic Slope within the U. S.

5.—Which two to the above ten would you put first because of their commerce? What one because of its manufactures? Is there any other river of the continent flowing into the Atlantic that you would consider quite as important as any you have named? Give your reasons for thinking so.

6.—Name the two largest rivers of each continent.

7.—What and where are these: Vienna, Manila, Nome, Honolulu, Liverpool, Pretoria, Yukon, Mindanao, St. Elias, Sault St. Marie?

8.—Select five of the most important productions of the United States. Which two would you put first among the exports? What part would be more likely to send more of each than another?

9.—How long do the days continue to increase in length? When will the days and nights be equal? Upon what three factors do the unequal days and nights and the changes of seasons primarily depend?

10.—Give the name and location of (a) one important river in Siberia, (b)

two important cities in China, (c) one seaport of India, (d) one important island of the Indian ocean.

III.

1.—If one were to travel from the north pole to the south pole, across what heat belts, or zones, would he pass? Mention them in order, giving their boundaries as reached, and the width in degrees of each zone. How many miles is such a degree?

2.—Name five groups of states. Name the states composing one of these groups and their capitals.

3.—The leading forms of production are agricultural, mineral, and manufactured; which of these takes the lead in the group you have mentioned? Mention some of the chief items produced. Which states of the group lead in any of these?

4.—If you were to go from New York City directly west to the Pacific coast, what states would you cross? Name them in order. Name in order five of the largest rivers you would cross.

5.—Beginning with Minnesota, name in order the states you would cross and the leading productions of each, following the west bank of the Mississippi to the Gulf.

6.—Mention five of the most important centers of foreign commerce in the U. S. Locate by states five of the most important inland cities.

7.—What and where are these: Volga; Vesuvius; Caucasus; Biscay; Bulgaria; Azov; Greece; Gibraltar; Odessa; Bosphorus?

8.—Which is the most northerly country of Europe? Southerly? Easterly? Westerly? The highest? The lowest? Which has the longest written history? Which is the most densely populated? Which is the most sparsely populated? Which has the most foreign commerce?

9.—Locate the three chief rivers of S. America. Locate three of the chief seaports. Locate the largest country and name two of the most important exports.

10.—What three countries occupy the largest part of Asia? What important Asiatic nation occupies no part of the mainland of the continent? Locate the Philippine Islands.

IV.

1.—What is meant by alluvial lands? Deltas? Tributaries?

2.—What is meant by climate? Name the four chief factors that determine the temperature of a place. What is longitude and how reckoned?

3.—Describe briefly the three chief drainage areas of Wisconsin, naming some of the largest streams of each.

4.—Name the continents in order of their size. Arrange them in order of population. Which ones are wholly in the northern hemisphere? Which ones in the southern?

5.—Locate these rivers: Columbia, Arkansas, James, St. Lawrence, Rio Grande. Locate the Cascade Mts., White Mts., Puget Sound, Hudson Bay, Cape Hatteras.

6.—Name the territories. Name the outlying possessions of the U. S.

7.—Use a brace and write the names of three states you would put first in these productions: cotton, wheat, corn, iron, coal.

- 8.—Name the three chief rivers of South America, Africa, Europe.
- 9.—Name the countries of Europe and their capitals.
- 10.—Where are the chief sources of the world's supply of cotton? Wheat? What two countries would you put first in commerce and manufactures?

V.

- 1.—Locate approximately five of the chief cities of Wisconsin. Name five of the largest rivers, giving the directions in which they flow.
- 2.—Locate two great ocean currents. Name any region whose climate is modified by either of them, and tell how.
- 3.—Besides fertile soil, what other conditions can you name that seem to be essential for abundant vegetation? Give an illustration showing the effect of the lack of one of these conditions. What is meant by irrigation? Isotherms?
- 4.—Give approximately the latitude and the longitude of the U. S., the area, the extent in miles, and the population.
- 5.—Locate the chief drainage areas of the U. S. Name four of the largest streams on each of the areas.
- 6.—What states are in the cotton belt? What states are in the wheat belt? What three cities are the chief export points of the cotton belt? How many stars are on our flag? Why?
- 7.—Name ten seas in, or bordering on Europe.
- 8.—Name the countries of Europe and the capitals of each.
- 9.—What nation controls the largest area in Asia? Second in extent? Third? What nation has the largest foreign commerce with the people of Asia? Locate three great seaports of Asia.
- 10.—What and where is each of these: Venezuela, Luzon, Martinique, the Transvaal, Everest?

VI.

- 1.—Name and describe the two motions of the earth. Mention an effect of each.
- 2.—What is the equator? Of what use are parallels and meridians? How many degrees from the equator to the north pole? About how many miles is it from the equator to the north pole?
- 3.—Upon what four things does the temperature of a place depend? How does each affect it?
- 4.—Make a pencil sketch to illustrate a river system. Indicate on it these: source, mouth, right bank, tributary, a river basin, (include the latter with a dotted line).
- 5.—About what is the latitude of La Crosse? Through about what degrees of latitude does Wisconsin extend? What degrees of longitude? Which is the largest river wholly within the state? Where was one of the earliest white settlements in the state?
- 6.—How does the area of the United States compare with that of Canada? With Mexico? With Europe? Through what degrees of latitude does U. S. extend? Through what degrees of longitude?
- 7.—What are the chief sources of the world's supply of cotton? Put first

6.—In what countries are the following articles made in quantities: clocks, cotton, cloth, wines, silk, machinery?

7.—Write in a column the names of four European countries that have possessions in Asia, and after each the possession.

8.—Locate and state one notable fact about each of the following: Tokio, Calcutta, Peking, Vladivostok, Mecca, Baikal, Tundra, Ceylon.

9.—What and where are: Port Arthur, Malacca, St. Peter's, Land's End, Bosphorus, Okhotsk, Gibraltar?

10.—Trace a route from Hong Kong to London.

XI.

(6th Grade).

1.—What mountain system is nearest us on the west? On the east?

2.—From the skin of what wild animal are buckskin gloves made? Are cutter robes made? Name three other wild animals of N. A.

3.—What country is north of ours? Name and locate three of its important cities.

4.—What great branch of the Mississippi river comes in from the west? From the east? Which is nearer the mouth?

5.—About one hundred miles up the river from here, one comes to the head of navigation and a big city. What is the name of this city?

6.—Near the mouth of the river is a large city, the streets of which are below the level of the river. Do you know its name?

7.—Name a state good for mining. For lumbering. For commerce. For fruit raising. For cotton raising.

8.—Where are there great cotton mills? Great pork packing-houses?

9-10.—What state is noted for maple sugar? For cod fishing? For petroleum wells? For rice fields? For its production of tar? For its great wheat fields? For its salmon fisheries? For its great herds of cattle? For its oysters? For its coal mines?

XII.

1.—What is latitude? How is it reckoned? What is longitude? How is it reckoned?

2.—Name the six continents in the order of their size. Which of them lie wholly in the northern hemisphere?

Name the zone in which you live, and give its boundaries.

3.—Locate the county seat of La Crosse county. Name two towns (not villages) in this county. In what direction from La Crosse is Winona? In what direction from La Crosse is West Salem? In what direction from La Crosse is Stoddard?

4.—Beginning at the north, name ten of the more important rivers that drain the Altantic slope of the United States.

5.—Name in the order of their importance, the four factors that determine the temperature of a place. Aside from the character of the soil what two things have most to do in affecting the vegetation of a place?

6.—Name three argicultural products of which the U. S. produces more than

any other country. Name three states among the foremost in the production of each. Name three of the foremost states in the production of iron ore.

7.—With what waters is the Mediterranean sea connected, and how? Name two peninsulas that project into it from the north.

8.—What countries of Europe border on the Mediterranean Sea? What countries or dependencies of Asia or Africa border on the Mediterranean Sea?

9.—Write in a column the names of five of the chief seaports of the U. S. In a second column opposite the names of any three of these ports, write the name of one of its chief articles of export. In a third column, three leading articles of import.

10.—Locate by countries, ten large seaports of Europe, five of Asia, two of S. A., and one of Australia. (Tabulate)

XIII.

1.—Draw the figure of a hemisphere. Show on it the position of each zone. Mark the latitude of their boundaries.

2.—What is usually the most important factor in determining the climate of a place? What other two factors might modify the effect of this one? Give an illustration.

3.—Name two of the largest rivers of each of any five continents, and the waters into which they flow. (Use brace and tabulate).

4.—Between what parallels of latitude does the U. S. lie? What countries of Europe lie wholly or chiefly between the same parallels? Of Asia? Of Africa?

5.—Locate the three principal water-sheds of N. A. To what drainage areas do they give rise?

6.—Beginning at the east, name with their capitals the states of the U. S. that border Canada and the Pacific Ocean. (Tabulate)

7.—Give approximately, the size of your own state, either in area or in extent. Name in order of importance the principal drainage slopes of the state and name the chief streams of each slope.

8.—About what is the latitude of your native city? What are some of the principal productions of your county? What railroads run into or through the county?

9.—Name three of the most important agricultural products of the U. S. with three states very prominent in the production of each. (Tabulate). Name two chief articles of export of the U. S., the port from which each is largely shipped, and a probable port of destination. (Tabulate).

10.—Locate five of the largest cities on the Mississippi river. Give reasons why any of them has grown up where it is in preference to some other point on the river.

XIV.

1.—Locate and bound La Crosse County. Name two cities, two villages, and three towns in this county.

2.—What can you say of the position and extent of Wisconsin? In what direction does the largest part of its surface slope? Name three of the largest rivers that drain the slope?

3.—Name five of the largest cities of the state, and tell in what portion of the

state each is located. What mineral productions are found, and in what part of the state? In what occupation are more of the people of the state employed than in any other?

4.—What is latitude? How is it indicated on maps? What is longitude? How is it indicated on maps? What point on the earth's surface has the least latitude and longitude?

5.—Name five forms of land. Define one of these and locate an example of it.

6.—If one were to start from the northern boundary of Minnesota and go directly south to the Gulf of Mexico, what states would he cross?

Name in order three great crop belts he would cross?

7.—Name ten seas in or bordering upon Europe.

8.—What nation in Europe has the largest foreign commerce? Name the largest city of Europe. What form of government has France? What form of government has Germany? What form of government has Turkey? What is the largest river of Austria, and into what does it flow? Name the highest mountain range in Europe, stating in what part of the continent it is. Name two peninsulas, each of which is occupied by two nations.

9.—Name three states that are foremost producers of each of the three crops mentioned in the sixth. Name three lake ports that ship large quantities of iron ore, and three other lake ports to which it largely goes.

10.—Name the highest mountain range of Asia. Name two of the largest rivers draining the eastern and two the southern slope of Asia. Name three of the most important countries of eastern or southern Asia, and the capital of each. Name the two largest rivers of Africa. Name the two largest rivers of S. A.

XV.

1 —Give as nearly as you can, these facts about Wisconsin: latitude, longitude, area, population, capital, three chief farm products, two chief mineral products; put each item in a line by itself.

2.—Name two cities, three villages, and three towns in this county.

3.—What states touch both banks of the Mississippi? What states touch only its east bank? Its west bank?

4.—What outlying possessions has the United States? Name two important productions of each of three of them.

5.—What route might it follow if a cargo of flour were shipped by water from Duluth to Liverpool?

6.—What three nations of Europe have the largest trade with the U. S.? Name three of the chief items of our exports to them, and two of our chief imports from them. With what country of S. A. do we have the largest trade, and what is the chief item of their sales to us?

7.—In a belt extending around the world from 25° N. latitude to 30° N. latitude, what are five of the most important agricultural productions? What in a similar belt between 40° and 45° N. latitude?

8.—Locate the chief mountain range of each of five of the continents.

9.—What bodies of water are separated by the isthmus of Suez? What bodies of land does it connect? Same of the isthmus of Panama.

10.—What three rivers of Europe would you name as being among those of the greatest commercial importance?

Which are the two largest rivers of Africa?

XVI.

- 1.—Locate by states ten of the chief seaports of the United States.
- 2.—Locate by states ten of the chief interior cities of the United States.
- 3.—What railroads has La Crosse? Name five prominent manufacturing industries of La Crosse.
- 4.—What states extend farther north than Wisconsin? What two rivers carry any portion of the waters of Wisconsin to the ocean? Name the longest stream of the state, and tell into which of the above named rivers its waters find their way.
- 5.—What is longitude? From what point is it generally reckoned? Name in order of importance three things that affect the climate of a place.
- 6.—Name three agricultural products in which the U. S. is foremost in the world. Name three states prominent in the production of each and a port from which each would probably be shipped for export. (Tabulate).
- 7.—Name the states that touch Wisconsin giving the capital and largest city of each. (Tabulate).
- 8.—Name in order beginning at the north, ten of the chief rivers that drain the Atlantic slope of the U. S.
- 9.—Give in tabular form the names of ten of the chief countries of Europe, with the capital of each.
- 10.—What and where are these: Vladivostok, Formosa, Korea, Manchuria, Tokyo, Hong Kong, Everest, Mudken, Amur, Tibet.

XVII.

- 1.—Bound Wisconsin. Give approximately: its area; its length in miles from north to south, its breadth from east to west.
- 2.—Name in order, beginning at the north, the four chief rivers that drain the western slope of Wisconsin and state into what they flow. Name and locate its most important mineral product. Name and locate five of the chief cities.
- 3.—On what four things does the temperature of a place mainly depend? What and where is the north temperate zone? What continents lie mainly within it?
- 4.—Which races of mankind have no powerful nations? Which two nations live chiefly in the torrid zone? Which race has the largest number of people under the control of the U. S? Which next? Which third?
- 5.—Mention some of the vegetable productions that are characteristic of each zone.
- 6.—Name the four chief drainage slopes of N. A., and three of the largest rivers of each. (Tabulate).
- 7.—What state has waters to flow into the Arctic ocean, the Atlantic Ocean, and the Gulf of Mexico? What state has a greater climate than any other? Give two reasons for this. What state is first in production of coal? What state is first in the production of iron ore? What state is first in population, wealth commerce, and manufactures?
- 8.—Arrange in tabular form the names of ten nations of Europe, their capitals, and form of government.

9.—Name ten seas in, or bordering on Europe.

10.—Compare Russia with Japan in situation, size, population, and wealth.

XVIII.

1.—What is meant by "the trade winds"? Locate them. Explain their importance to man.

What is a glacier? a geyser? an isthmus? Give illustrations.

2.—Name four peninsulas of Asia. In what general direction do they project? Name five bodies of water which touch Asia.

3.—Compare Iowa with Alabama as regards area, surface, climate, population, principal crop.

4.—Locate Hawaii; the Phillippine Islands. Of what importance are they to the U. S.? Name the principal city of each. Name two products of each. Where is Mauna Loa? What is it?

5.—Compare Africa with South America as to

(a) size;

(b) location and chief mountain system;

(c) number of large river systems;

(d) large and important cities;

(e) number, size, and importance of lakes.

6.—Define delta, archipelago, estuary, river-basin, volcano, atoll, strait, selvas, sound. Name and locate an example of each.

7.—Describe fully the Nile river.

8.—Describe and locate Niagara Falls, Yellowstone Park.

9.—What is hay? Where largely produced?

10.—Write a letter from one of the following cities describing its location, sources of wealth and objects of interest: Edinburgh, Venice, Paris, Constantinople.

XIX.

1.—Describe the formation of coal. Distinguish between the different kinds. What is peat?

2.—Explain the relief system of N. A. In it locate five mountain ranges and five peaks.

3.—Upon what natural resources do the industries of New England depend? Answer by states as far as you can.

4.—Which has the warmer climate, Boston or Seattle? Give reasons for your answer. How does the climate of Minneapolis differ from each?

5.—Explain standard time. What is the difference between standard time and sun time?

6.—Give cause and effect of land and sea breeze. What are monsoons? What are known as trade winds? Why so named?

7.—Locate six cities in England and four in France. Give reasons for location, and important industry of each one.

8.—Locate the following and state some important historical fact connected with each: Lake Champlain, Boston, St. Augustine.

9.—What state in the Union excels in the production of (a) coal, (b) rice. (c) cotton, (d) copper, (e) gold?

10.—Name the states bordering on the Gulf of Mexico and give their capitals.

XX.

1.—Give briefly but definitely (a) three proofs of the earth's shape; (b) Two results of the earth's rotation on its axis.

2.—Define climate and mention those conditions that influence it.

3.—Locate and describe briefly any five of the following: Korea, Porto Rico, Yokohama, Gibraltar, Manchuria, the Balkan Peninsula, Finland, Transvaal.

4.—Over what waters would an ocean steamer pass in going from St. Petersburg to Odessa by the shortest available route?

5.—Name not more than seven countries (in all) that supply the markets of the world with the following, stating what product each country supplies: (a) wheat, (b) cotton, (c) coffee, (d) diamonds, (e) gold.

6.—Compare the West Indies with the Eastern Archipelago as to location, climate, products, inhabitants.

7.—What are ten of the following: teak, ivory, whalebone, copra, quinine, asphalt, amber, treacle, sisal, bran, nutmeg, sardines.

8.—Mention an important seaport of: (a) Scotland; (b) Holland; (c) Texas; (d) Russia; (e) Philippines; (f) Egypt; (g) Venezuela; (h) Hawaii; (i) China; (j) Norway; (k) Washington.

9.—On what waters would a ship sail in going from London to St. Petersburg? From London to Athens?

10.—Where in the United States are the following most abundantly produced: Beet sugar, cane sugar, marble, turpentine, mercury.

XXI.

1.—Draw a map of the western coast of the United States and outline the coast states.

2.—Locate: Columbia R., Seattle, Portland, San Francisco, Sierra Nevada Mts.

3.—In what zone are the Philippine Islands? Name the longest island; the capital; three important products.

4.—Name and locate two other island possessions of the United States.

5.—Give area (main body) and population of the United States.

6.—Name one state that leads in each of the following: Manufactures, corn, cotton, mining.

7-8.—Germany. Describe the surface. Name and locate two important rivers. Name and locate the most important seaport. Give two important exports.

9-10.—Name and locate the capital of Spain. The largest city in Italy. A leading seaport in Japan. Two canals not in the United States.

XXII.

1.—Name three of the prevailing religions of Asia and state where found.

2.—Name five wild animals one might encounter in going from Madras to the mouth of the Yenesei river.

3.—Locate Yokohama, Calcutta, Singapore.

4.—Name the state that leads in the production of each of the following: (a) Dairy products. (b) Cotton. (c) Corn. (d) Manufactures. (e) Sugar. (Use the form, Fruit, California).

5.—Give two leading products of each of the following: Argentina, Germany, Australia, Canada, Philippine Islands.

6.—Draw a map of the eastern coast of Asia, including the principal island of the Japanese Empire and of the Philippines. Locate on your map four seas, two rivers, three seaports, and one peninsula. (Scale about $\frac{1}{4}$ inch to 100 miles).

7.—Name two localities in which each of the following is abundantly produced: Coffee, silk, bananas, rubber, and wool.

8.—Name ten states of the United States that have seaports and the chief seaport for each state named.

9.—Bound Brazil, naming natural boundaries as well as political.

10.—Sketch a map showing the relative positions of Porto Rico, Cuba, southern coast of Florida, New Orleans, eastern terminus of purposed Panama Canal, and the northeastern coast of South America. (Be careful of distances).

XXIII.

(3rd Grade).

1.—Draw a map showing the following: Gulf, peninsula, cape, island, strait.

2.—How many continents are there? Name them.

3.—What is a river? Name two that you have seen.

4.—What are the following: Pacific, Mexico, Cuba, Africa, Mississippi?

5.—Name five animals of the torrid zone.

6.—In what zones do these grow: wheat, bananas, spices, cotton, coffee?

7.—Name the five zones. Which is the hottest? Which is the coldest?

8.—What is the equator?

9.—Name three occupations of your county. Name your county.

10.—If you could travel, where would you visit? Why?

XXIV.

(4th Grade).

1.—Name three countries of North America and their capitals.

2.—How many motions has the earth? Name one thing that each effects.

3.—Draw a river and mark its source, right bank, left bank, mouth.

4.—Name and locate the five zones.

5.—Name a river that flows into the Arctic ocean, the Atlantic ocean, into the Gulf of Mexico, the Pacific ocean, Hudson Bay.

6.—Name the continents that touch the Pacific ocean.

7.—About how wide and how long is the United States?

8.—Name the Great Lakes and tell what river drains them.

9.—What and where are: Yukon, Cuba, Shasta, Ottawa, Yucatan, Cod.

10.—Name four important seaports on the Atlantic, one on the Pacific, one on the Gulf of Mexico. Name the largest city of your state; of the United States.

XXV.

(5th Grade).

- 1.—Name the most important countries of Europe.
- 2.—What productions do we send to England? What does she send to us?
- 3.—Locate China. Name its capital and principal seaports.
- 4.—What and where are the following: Tibet, jungles, Suez, Manchuria, Ceylon?
- 5.—Name the largest and second largest city of Europe and locate each.
- 6.—Name two of the most important rivers of Africa. Why important? Name and locate two other important rivers of Africa.
- 7.—What island empire is east of China? To what race do her people belong?
- 8.—Where are the Alps? The Himalayas? The Andès? The Atlas? the Rockies?
- 9.—What country of South America leads in the production of coffee? Of wheat? From where is each shipped?
- 10.—If you were to travel, where would you visit? why?

XXVI.

(6th Grade).

- 1.—What rivers, mountains, and seas separate Europe from Asia? Europe from Africa?
- 2.—What warm current reaches the shores of western Europe? How does it affect the climate?
- 3.—What can you say of the government of European countries?
- 4.—Name the six great powers of Europe.
- 5.—On what waters would a ship sail in going from Marseilles to St. Petersburg? From Liverpool to Bombay?
- 6.—What country in Asia belongs to Great Britain? To Russia? What independent empire in eastern Asia? What island empire off the coast?
- 7.—Name the chief exports of China. Four chief exports of British India.
- 8.—To what Asiatic city would an importer send for cotton? Tea? Coffee? Shawls? Spices? Silk?
- 9.—Upon what things does the climate of a place chiefly depend?
- 10.—Compare the climate of Labrador with that of the British Isles. Give reason for the difference.

XXVII.

(7th and 8th Grades).

- 1.—Name the continents in order of their size. Which one lies wholly in the northern hemisphere? Which one lies partly in both, the northern and southern hemispheres?
- 2.—In Europe, Asia, and North America name two mountain regions, putting

the most important first; name a large river having its source in those mountains, the general direction of its flow, and the water into which it flows.

3.—What and where is the equator? The tropic of Cancer? The tropic of Capricorn? Which is the longest and which is the shortest day of the year on each of the tropics?

4.—If a line were drawn so as to separate the drainage of the St. Lawrence system from the others, through what states would the line pass?

5.—Which of the states of the Atlantic slope send a part of their drainage waters into the Mississippi River? What states west of the Mississippi send only a part of their drainage waters into it?

6.—Bound Wisconsin. Name five of its largest rivers, five of its largest cities, and five of its principal productions.

7.—Not including gold and silver, which are the most important mineral productions of the United States, and in what states are the chief sources of supply of each.

8.—In what four agricultural products does the United States rank foremost in the world? Name five states prominent in the production of each.

9.—With what three countries does the United States have its largest foreign trade? Mention five of the most important of our exports in that trade. Mention five of our principal imports with the country or countries from which they come.

10.—Locate by countries ten of the great cities of the world.

XXVIII.

1.—About what is the temperature of the room in which you are sitting? About what is the temperature of a hot day in summer? Of a cold day in winter?

2.—In what zone is a place one thousand miles east of us? One thousand miles west?

3.—In what zone are fur-bearing animals found? In which does the monkey live? From what animal is the whalebone taken? Where is it found?

4.—Name a fruit produced by the palm tree. Name two trees you know by sight.

5.—What is meant by commerce? By transportation? By agriculture? By manufacturing?.

6.—Name three articles made in factories in La Crosse.

7.—Name three grains, two vegetables, and one fruit raised in quantities by the farmers around La Crosse.

8.—How far is it from your schoolhouse to the center of the earth?

9.—The earth turns as a top turns. What is the motion called?

10.—Where does latitude begin? In which direction does it extend?

XXIX.

1.—Give approximately the days of the year when the sun's rays are most oblique at the equator.

2.—Define estuary. Mention a great estuary of (a) Scotland; (b) England.

3.—Mention an important lake port of (a) Ohio; (b) Illinois; (c) Ontario;

(d) New York; (e) Michigan.

4.—What waters are connected by (a) the Suez canal; (b) the Welland canal; (c) the Champlain canal; (d) the Erie canal?

5.—Mention three important ports on the Pacific connected with San Francisco by steamship lines?

6.—Mention an important possession of England in (a) Africa; (b) Asia; (c) South America; (d) North America.

7.—What is the principal seaport of (a) Scotland; (b) Mexico; (c) Argentina; (d) Cuba; (e) Canada.

8.—Mention and locate five countries of New York which bear the names of lakes within or adjacent to them.

9.—What waters would be traversed by one on a direct voyage from the mouth of the Nile to the mouth of the Ganges.

10.—Show how the mineral wealth of England has been conducive to manufacturing interests.

XXX.

1.—Define climate, latitude, longitude, and name five conditions that modify climate.

2.—Bound England and tell of its climate.

3.—Name the physical divisions of the United States, and tell what each produces.

4.—Draw an outline map of Wisconsin, locating principal rivers, cities, and industries.

5.—What are imports? What are exports? Name five of each for this country.

6.—Locate five principal ports of the United States. Five principal inland cities.

7.—Name five peninsulas which project in a southerly direction, and state from what country.

8.—Describe the largest mountain range and the longest river of North America; of South America; of Europe.

9.—Locate and tell what the following represent: Cairo, Rhine, Corsica, Liverpool, Bering..

10.—Name the regular waters on which a vessel would sail in going from Chicago to London.

Wisconsin.

Wisconsin! thou precious gem
 In Liberty's bright crown,
 Let all thy sons and daughters sing
 Thy glory and renown.
 How many heroes, now at rest,
 With records fair and bright,
 As staunch and noble sons of thine
 Have fought for Freedom's right!

1. **Location.** Wisconsin belongs to the northern states, and lies in the central part of this section. It is about 1000 miles from the Atlantic ocean, 1000 miles from the Gulf of Mexico, and 2000 miles from the Pacific ocean.

2. **Boundary and extent.** Wisconsin is bounded on the:

- a. north, by Minnesota, Lake Superior, and Michigan;
- b. east, by Lake Michigan;
- c. south, by Illinois;
- d. west, by Iowa and Minnesota.

3. **Latitude and Longitude.** The land area of Wisconsin lies mainly between the parallels of $42^{\circ} 30'$ and 47° north latitude, and between the meridians of 87° and 93° west longitude.

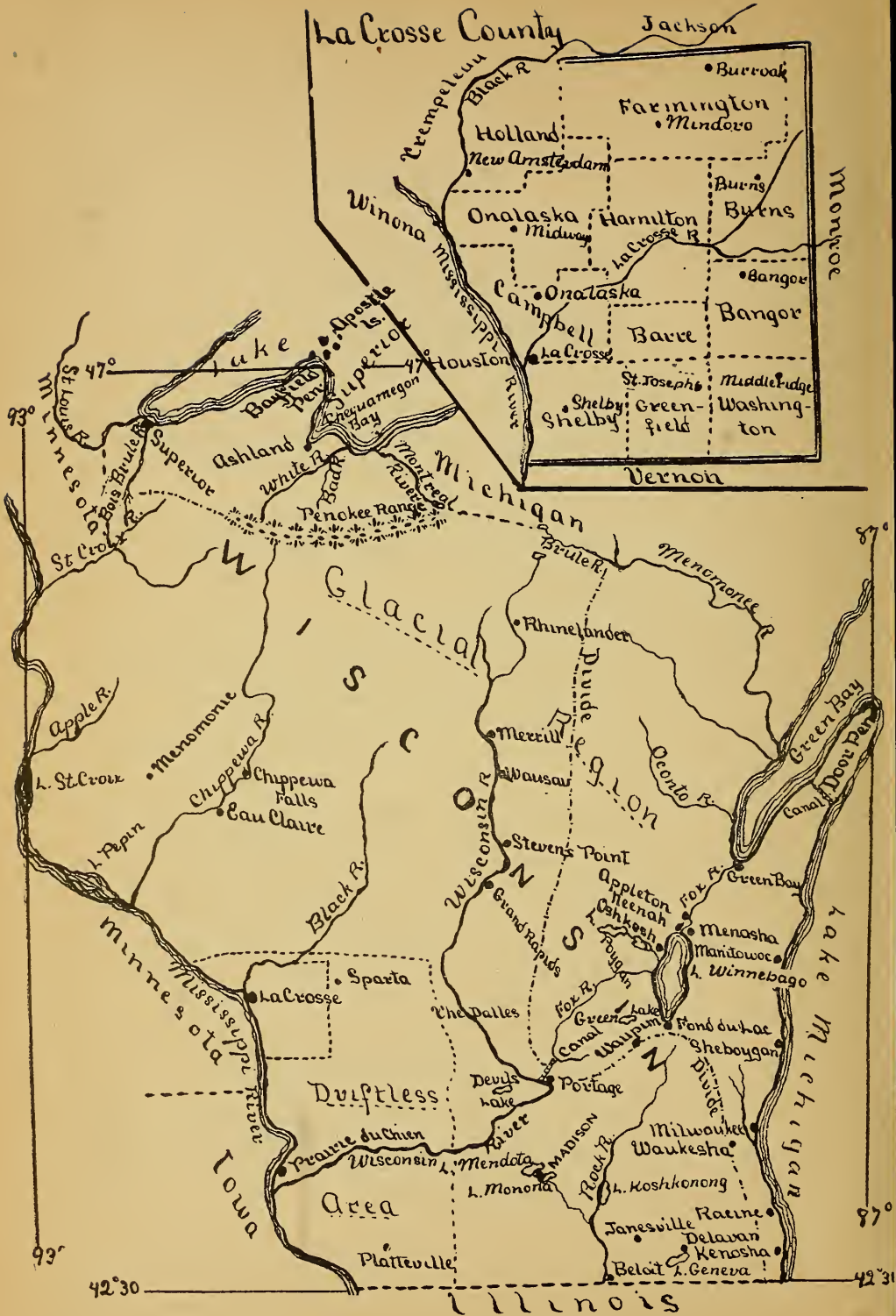
4. **The form** of Wisconsin may be likened to a mitten, the thumb of which is the peninsula of Door county, projecting into Lake Michigan.

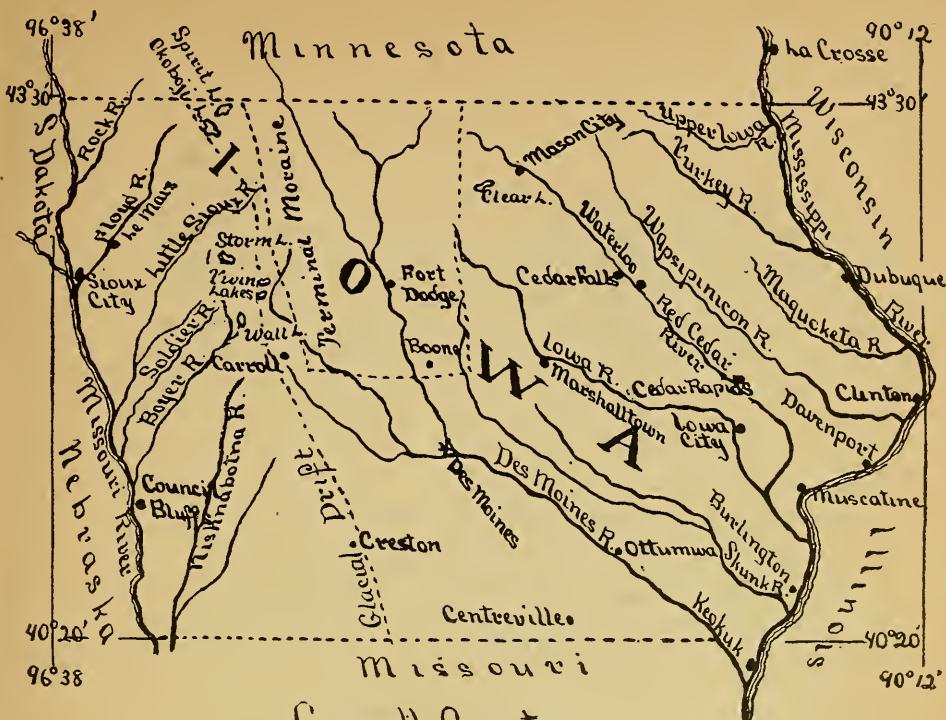
5. **Size.** The greatest length of this state from north to south, including the Apostle islands, is three hundred seventeen miles, and its greatest width from east to west, including the islands, is three hundred miles. The total area is fifty-six thousand, forty square miles (35,865,600 A.), and its population is over two million (2,069,042). It is about as large as Iowa, Illinois, and Florida each. It is five thousand square miles larger than England, and one-fourth as large as France.

6. **Drainage:**

a. Wisconsin is situated at the head of the two great and principal drainage systems of the continent of North America.

On the north and east its rivers flow into lakes Superior and Michigan. These lakes lie in the upper St. Lawrence basin, and empty their waters eventually, by means of the St. Lawrence river and gulf, into the Atlantic ocean.





Carroll County

Sac		Calhoun	
Breda. Wheatland	Kniest Mt. Carmel	Sheridan Lidderdale	Lanesboro Jasper
Arcadia Arcadia	Maple River Je. Carroll Carroll	Grant	Glidden . Glidden
Washington	Halbur Hillsdale Roselle	Pleasant Valley . Willey	Richland
Warren . Mannum	Templeton Eden	Dedham Newton	Union Coon Rapids
Audubon		Guthrie	

Crawford

Greene

On the west the rivers flow into the Mississippi river, and empty eventually into the Gulf of Mexico.

The Wisconsin river, belonging to the Mississippi, is separated from the Fox, belonging to the St. Lawrence system, only by a marsh, one and one-half miles wide. The United States government has connected them by a canal, at Portage (Portage canal) thus making it possible for steamboats to pass from Lake Michigan to the Mississippi river.

b. Slopes and Rivers.

The chief slopes are:

1. The Lake Superior slope, the chief rivers of which are the St. Louis, Bois Brule, Bad, White, and Montreal.
2. The Michigan slope, the chief rivers of which are the Fox, Menomonie, Oconto, and Milwaukee.
3. The Mississippi slope, the chief rivers of which are the Wisconsin, Chippewa, St. Croix, Black, and La Crosse.

7. Scenery.

Wisconsin is noted for the quiet scenes of rustic beauty found along its many clear and beautiful lakes, and for the picturesque bluffs found along its winding rivers. Some of the noted scenes of attraction are: The Apostle isles, the brown sandstone cliffs of the Bayfield peninsula, Lake Pepin, the four lakes of Madison, the gorges or dalles of the Wisconsin and the St. Croix rivers, and the falls at the mouth of the Montreal river.

8. Climate:

The mean temperature of the winter is about 0° , varying, however, from 25° above zero to 50° below zero. The mean temperature of spring and autumn is 47° , and that of summer, 72° . The climate of Wisconsin is greatly modified by the influence of the Great Lakes. The winters are quite severe but the air is dry. The summers are short and warm. The autumns are long and most pleasant. Nowhere in the United States are the beautiful effects of Indian summer seen to greater advantage.

The mean annual rainfall, or quantity of rain and melted snow, is about twenty-nine inches.

9. Occupation and Productions.

- a. Agriculture. The growing of grain, hay, potatoes, tobacco,

cereals, and the raising of stock, are the chief branches of this industry. About sixty per cent of the land area of the state is included in the farms. Most of the soil of the north is well adapted to agriculture; but here also, there are large sandy tracts which are suited only to the growth of pine forests. The prairies of the central and southern portions are very rich and productive.

b. Manufacturing. The principal manufactures, according to value, are as follows: lumber and timber, flour and grist, foundry and machine shop products, cheese, butter and condensed milk, leather, malt liquors, packed meat, paper, and wood pulp.

The forests of the north furnish a vast amount of lumber, and the streams flowing into Lake Michigan and Green Bay furnish water power for the lumber mills which are the largest in the country. Vast areas of northern Wisconsin were covered with fine growths of pine before 1836, but thousands of acres have been cut. The forest fires have also been destructive. Various tracts of northern and central Wisconsin are covered with heavy hard wood timber, maple, hemlock, birch, hickory, oak, and elm.

c. Dairying. This is a very important industry, Wisconsin yielding one-fourth of all the cheese produced in this country.

d. Mining. Mining is extensively pursued in the iron-producing region, on the boundary line between Wisconsin and Michigan, in the regions of the lead and zinc deposits of the southwest; and in the numerous stone quarries throughout the state.

Mineral waters, valued at over a million dollars, are shipped annually.

e. Fishing is a valuable industry along the Great Lakes, the many inland lakes, and the rivers. White-fish and trout are caught in the Great Lakes, and in the inland waters, bass, pike, pickerel, perch and sturgeon are found. The total value of the catch each year is about \$2,000,000.

10. History. Wisconsin, sometimes called the "Badger State", was admitted to the Union in 1848. The first mission was founded in 1665, at La Pointe, or the Chequamegon bay, by Father Allouez.

The first white settlement was made about 1760 at Green Bay, by the Langlade family. Other early settlements were made at Prairie du Chien, Milwaukee, and Portage.

During the Civil War Wisconsin sent a large number of able-

bodied men into service for the Union, over ten thousand of whom died for the cause for which they fought. Wisconsin volunteers mainly composed the famous "Iron Brigade".

11. Cities. The six largest cities in order of population:

a. Milwaukee (312,948) is located in the southeastern part of the state, on Lake Michigan. Being so situated, it is cooler in the summer, and warmer in the winter, than places inland. It is a great railway center, and is famous for its lake commerce. The principal manufactures are malt liquors, machinery, leather products, and flour. For many years the population was largely of German birth, and Milwaukee acquired the title of "German Athens of America".

b. Superior (36,551) is situated at the head of Lake Superior on the St. Louis river, across the bay from Duluth, with which it is connected by street car line. Its railway connections are important, and it commands a growing lake commerce. The building of steel whaleback vessels is an important industry, and large steel and iron works, and lumber and flour mills are located here.

c. Racine has a fine harbor, being situated on Lake Michigan at the mouth of the Root river. Important industries are the manufacture of agricultural implements, carriages and wagons, doors and window sashes.

d. Oshkosh, situated on the upper junction of the Fox river with Lake Winnebago, was named from a prominent chief of the Menomonie tribe. It is one of the chief centers for the manufacture of sashes, doors, blinds, and also has large factories for the making of matches, furniture, and carriages.

e. La Crosse (29,078), located at the junction of the La Crosse and Mississippi rivers, is a most picturesque city. It has large manufactures of lumber, and the making of farm implements is an important industry.

f. Madison, located in the southern part of Dane county, is the capital. It is an important railroad center and commands a great trade throughout the southern and western parts of the state.

g. Other important cities are Sheboygan, Green Bay, Eau Claire, Fond du Lac, Janesville, and Ashland.

12. Institutions.

a. State: At Mendota and Winnebago there are State and In-

sane hospitals; a School for the Blind at Janesville; a State School for Dependent Children at Sparta; a Home for the Feeble-minded at Chippewa Falls; a School for the Deaf at Delavan; an Industrial School for Boys at Waukesha; the State's Prison at Waupun; and the State Reformatory at Green Bay.

The principal colleges include the University of Wisconsin at Madison; the Beloit college at Beloit; the Downer college at Milwaukee; the Lawrence University at Appleton; the Normal Schools at Oshkosh, Stevens Point, Platteville, Superior, White-water, Milwaukee, La Crosse, and River Falls.

Menomonie has one of the finest Manual Training Schools in the country.

b. Religious: Schools for higher education of boys include seven colleges in the Milwaukee diocese, two in the Green Bay diocese, and one in the La Crosse diocese; for higher education of girls, seven academies in the Milwaukee diocese, two in the La Crosse diocese, one each in the Green Bay and Superior dioceses.

There are Catholic Industrial schools and other charitable institutions, throughout the state in the various large cities.

The state includes the archbishopric of Milwaukee, the bishoprics of La Crosse, Green Bay, and Superior.

Wisconsin. See Page I.

Poem. 1. Location, 2. Boundary and extent. 3. Latitude and longitude. 4. Form 5. Size. 6. Drainage: (1) Its situation at the head of the great drainage systems of Wisconsin. (2) Slopes and rivers. (3) Lakes. 7. Scenery 8. Climate. 9. Occupations and productions: (1) Agriculture. (2) Manufacturing. (3) Dairying (4) Mining. (5) Fishing. 10. History 11. Cities. (1) Six largest. (2) Name other important cities. 12. Institutions: (1) State. (2) Religious.

LA CROSSE COUNTY.

1. Position and Size. La Crosse county is located in the western part of Wisconsin, on the left bank of the Mississippi river.

It is one of the smallest counties of the state, having an area of only 468 $\frac{3}{4}$ square miles.

2. Boundaries. It is bounded on the:

a. north, by Trempealeau and Jackson counties;

b. east, by Monroe county;

c. south, by Vernon county;

d. west, by the Mississippi river; or, by Winona and Houston

counties of Minnesota.

3. **Surface and Drainage.** About one-third of the surface of the county is prairie land of rich black soil; one-third is suitable for pasture land; while the remainder is covered with forests, swamps, and bluffs. It is well watered and adapted to both, valley and ridge farms. The rivers are: the Black in the north, which is navigable for rafts and raft-boats, and the La Crosse river in the south. This river is not navigable.

4. **Occupations and Productions.** Agriculture is one of the chief occupations, and the principal agricultural productions are: cereals, orchard fruits, vegetables and berries.

Manufacturing is also quite extensively carried on and the leading productions of this occupation are: copper, iron, lead, stone, lime, and clay for bricks.

5. **Railroads.** The railroads of La Crosse county are: Chicago and Northwestern, Chicago Milwaukee and St. Paul, Burlington and Northern, and Green Bay.

6. **Cities.** The only two cities of La Crosse county are La Crosse and Onalaska. La Crosse the county seat, is located in the southwestern part, on the Mississippi river. It is in $43^{\circ} 45'$ north latitude, and $91^{\circ} 30'$ west longitude. The city is the fifth in the state in size, consisting of twenty-one wards and having a population of 29,078, in 1909.

It has many factories and the important manufactures are: lumber, flour, crackers, candy, furniture, boots and shoes, wagons and carriages, doors and sashes, rubber goods, leather, paper, farm machinery, and electrical machinery.

Onalaska is located north of La Crosse.

7. **Villages.** The villages of the county are: Holland, Midway, Bangor, West Salem, New Amsterdam, Sytler, Burroak, Burns, and Mindora.

8. **Towns, or Townships.** The county is divided into eleven townships: Holland, Farmington, Burns, Hamilton, Onalaska, Campbell, Barre, Bangor, Washington, Greenfield, and Shelby.

La Crosse County. See Pages VII. and VIII.

1. Position. 2. Boundaries. 3. Surface and drainage. 4. Occupations and productions. 5. Railroads. 6. Cities. 7. Villages. 8. Town or townships.

Iowa.

Bending low beneath their weight,
 Here we see both tree and vine,
 Yielding up their luscious fruit
 In the golden harvest time.
 Cornfields swaying in the sun,
 Holding fast their wealth untold,
 Rising, falling, with the breeze,
 Like a billowed sea of gold.

1. **Location.** Iowa is situated in the north central part of the United States, extending from the Mississippi to the Missouri river.

2. **Boundaries.** It is bounded on the:

- a. north, by Minnesota;
- b. east, by Wisconsin and Illinois;
- c. south, by Missouri;
- d. west, by Nebraska and South Dakota.

3. **Latitude and Longitude.** It extends through three and one-sixth degrees of latitude and about six and one-half degrees of longitude, lying between the parallels of $40^{\circ} 20'$ and $43^{\circ} 30'$ north latitude, and between the meridians of $90^{\circ} 12'$ and $96^{\circ} 38'$ west longitude.

4. **Size.** The greatest length of the state, from north to south, is two hundred ten miles; the greatest width, from east to west, is three hundred ten miles. The total area is fifty-six thousand twenty-five square miles, and its population is over two million (2,231,853). Iowa is about the same size as Wisconsin. It is but little smaller than England and Wales taken together.

5. **Drainage.**

a. **Slopes and Rivers.**

1. **Mississippi Slope:** The chief rivers of this slope are the Upper Iowa, Turkey, Maquoketa, Wapsipinicon, Iowa with its northern branch, the Cedar, Skunk, and Des Moines.

The Des Moines system is the greatest, and commercially the most important. The Cedar forms the second largest interior system of the state.

The state is prolonged by a southeastern corner to include the entire channel of the Des Moines.

2. Missouri slope.

This slope is drained by shorter and swifter rivers, the principal ones being the Rock, Floyd, Little Sioux, Soldier, Boyer, Nishnabotna, and Nodaway.

b. Lakes:

Northwestern Iowa is an extension of the celebrated lake region of Minnesota, all of glacial origin. The most noted is Spirit lake, near the northern boundary. It is fourteen miles in circumference. East and West Okoboji lakes are united by a narrow strait. Clear and Storm lakes are in the open prairie (each covering an area of several hundred acres). Wall and Twin lakes are partially surrounded by walls, which look as if laid by man, but are in reality, the work of nature. All of these lakes are noted summer resorts.

6. Climate. Iowa has a cool climate, but there are great ranges of temperature from excessive heat in summer, (often 100° above zero), to extreme cold in winter, (sometimes 40° below zero). The average temperature, however, ranges from 95° above to 20° below zero. The severity of the winter is somewhat tempered by freedom from excessive moisture. The dry, pure air of its rolling prairies affords a valuable sanitarium for consumptives. The climate is very healthful, and but few diseases can be traced to climate influences. The annual average rainfall is about forty inches.

7. Soil. The greater part of the surface consists of a heavy, dark drift loam of wonderful, and seemingly inexhaustible fertility. In the west there are silicious deposits of great depth and richness. In the river valleys the soil is of alluvial origin, and is unsurpassed in productiveness. There are no swamps and few natural forests. The only woods are those along the streams, occupying in all only seven thousand square miles. The only rough spots are the bluffs, where the rivers have cut their paths through the glacial drift. There is no state in the union that has so small an area of barren soil.

8. Occupations and Productions.

a. Agriculture. Judging from its fertile soil, abundant rainfall,

good drainage, and generally level surface, it seems that nature has decreed that Iowa should be a great agricultural state.

The leading crops are: corn, oats, barley, rye, flax, potatoes, and hay. Corn is the leading article, and nearly one-fourth of the area of the state is devoted to the raising of this crop. Millions of bushels are used within the state to fatten the great numbers of cattle and hogs reared annually, and many millions of bushels are exported. Stock-raising is extensively carried on, and in this branch of agriculture Iowa holds a foremost rank among the states of the union. It is also a leading state in dairy products. Large quantities of apples, grapes, and cherries are produced in the southern part of the state.

b. **Manufactures.** The prosperity and fast-growing population of the state, together with its abundant supply of bituminous coal, have, within the last few years, greatly influenced the progress of the manufactures. Some of the chief manufacturing industries are: meat-packing, the production of cheese, butter, condensed milk, flour, and of the different grain products. The leading manufactures are: agricultural implements, carriages, wagons, machinery, lumber, pottery, brick-tile, starch, and sorghum sirup.

c. **Commerce.** The chief exports are the surplus of the farm, and manufactured products, and the imports are articles of necessity, comfort, and luxury for the people. Of what does the surplus of the farm and manufactured products consist?

The Mississippi is the only river in practical use for transportation, but the state is a vast net-work of railroads, seven of the great trunk lines crossing it. Every one of the ninety-nine counties has at least one railroad, and no place within the borders is more than twelve miles from a railroad station.

9. **History.** Iowa (The "Hawkeye state") was admitted as a state in 1846. A party of ten white men, under the leadership of Julius Dubuque, established, in 1788, the first white settlement at the place where Dubuque now stands. For many years after this settlement the territory was still held by the Indians, and their power was not broken until the defeat of Black Hawk in 1832.

Indian names abound throughout the state. The names of

twenty counties are of Indian origin, and hundreds of local names are derived from the same source.

10. Cities:

a. Des Moines (62,139), the capital of the state and the county seat of Polk county, is located in the south central part of the Des Moines river. The state-house is one of the finest buildings of its kind in the Union having been erected at a cost of \$3,000,000. The city is an important railroad center, most of the principal railways of the state enter it. It is centrally located in the heart of the coal region, and is in one of the best agricultural regions of the state.

b. Dubuque (36,297), in the eastern part, is most picturesquely situated on the Mississippi river. It has extensive manufactures of lumber, clothing, carriages and wagons, malt liquors, packed meat and machinery. It has a large wholesale trade and important commercial and mining interests. In educational facilities it holds a front rank.

c. Davenport (35,254), is located on the Mississippi river opposite Rock Island and Moline, Illinois. Its private and public schools are excellent. Many factories, machine shops, and foundries are located here.

d. Sioux City (33,111), situated at the confluence of the Missouri and Big Sioux rivers, is the largest city in the northwestern part of the state. It has an excellent system of schools, and its manufactures furnish employment to many people.

e. Council Bluffs (25,802), is an important city on the Missouri. It is opposite Omaha, and connected with it by several fine railroad bridges.

f. Cedar Rapids, a beautiful city of the interior, is located on the Cedar river. It has immense packing houses and its educational facilities are excellent.

g. Other important cities are: Burlington, Keokuk, Clinton, Muscatine, Waterloo, Fort Dodge, Marshalltown, Iowa City, Cedar Falls, and Boone.

11. Institutions.

a. State. Benevolent and reformatory institutions include: A College for the Blind at Vinton, an Industrial School for Boys

at Eldora, and one for girls at Mitchellville, an institution for the Feeble-minded at Glenwood, a School for Deaf-mutes at Council Bluffs, a Soldiers' Orphans' Home at Davenport. State Penitentiaries are located at Fort Madison and Anamosa, and the state hospitals for the insane, at Mt. Pleasant, Independence, Clarinda, and Cherokee. The State University at Iowa City, the State College of Agriculture and Mechanic Arts at Ames, and the Iowa State Teachers' College at Cedar Falls, are state institutions for higher education.

Iowa College at Grinnell, Lenox College at Hopkinton, Cornell College at Mt. Vernon, Upper Iowa University at Fayette, Des Moines College at Des Moines, and Penn College at Oskaloosa are important institutions.

b. Religious: Schools for the higher education of boys include: one college in Dubuque diocese and one in the Davenport diocese; for higher education of girls, twenty-five academies in the Dubuque diocese, seven in the Davenport diocese, and three in the Sioux City diocese. There are many hospitals and other charitable institutions in the larger cities of the state.

Iowa includes the archbishopric of Dubuque and the two bishoprics of Davenport and Sioux City.

Iowa. See Page IX.

Poem. 1. Location. 2. Boundaries. 3. Latitude and longitude. 4. Size. 5. Drainage: (1) Slopes and rivers. (2) Lakes. 6. Climate. 7. Soil. 8. Occupations and productions: (1) Agriculture. (2) Manufactures. (3) Commerce. 9. History. 10. Cities: Six largest. 11. Institutions: (1) State. (2) Religious.

PRONOUNCING VOCABULARY

Ä ber deen'	Än'glō Săx'on	à töll'
Äb ô rig'l'nal	An năp'ō lis	ät'tār
Ä'brä hăm	Ant'äre tic	Ät tıl'lä
Äb ȳs sıl'l'a	än'thrä cıte	Au'burn
Ä ca pul'ea	An ti cös'ta	Au gūs'ta
Ä cön cä'guä	Än tıl'lēs	Aul la gas (oul yä'gas)
Ad'e lā'de	Änt'wērp	Äu rō'rä Bō rē ä'lis
Ad'dis Ab'e ba	Äp a läch'I cō la	Aus'tin
Ä'den	Äp'ęn nınes	Aus trā'lı a
Ad i rōn'dack	Ap pa lä'chl'an	Aus trı a Hun'ga ry
Äd rı ä'n ö'ple	Äp'ple tön	A vig non (ä vĕn yōn')
Äd rı ät'ic	äq ue duct (äk wē dükt)	Ä zōf'
Ae gē'an	A rä'bi a	A zōres'
Ae gi na (ē jı'nä)	Är'äbs	Äz'tees
Af ghän ls tän'	Ä rä fų'rä	Bä'bä
Af'rı ca	Är'al	Bä'bēl
A gūl'has (yäs)	Är'a rät	Bäb ēl Män'dēb
Al a bä'ma	Äreh än gel	Bäb'ȳ lon
Äl'ba ny	är ehi pēl'a gō	Bäb ȳ lō'nı ä'n
Äl'bę märe	äre'hı tēct'üre	Bäf'fin
A lās'ka	Äre'tic	Bä hä'mas
Al bert Nyän'za	Ar e quı'pä (kē)	Bä hı'ä
Al bü quer que. (kär'kā)	Är gēn tı'na	Bäi'käl
Äl'dēr ney	Ar i zō'na	Bäl ę ä'r'ic
A leü'ti an (shı)	Är'kan säs	Bäl kän'
Äl'ęx ä'n'drı a	Ärı'bērg	Bäl kăsh'
Äl gē'rı ä	är mä dıl'lō	Bäl'tic
Äl giērs'	Är mäg'h'	Bäl'tı mōre
Äl hăm'brä	Är mē'nı ä	Bä lų chıs tän'
Äl'kà lıne	är'sē nal	Bäne'ä
Äl'lę ghä nȳ	Äshę'vılē	Bän'dä
Äl'lę ghę nȳ	Äsh land	Bäng kök'
äl loyed'	Ä'sı a (shıa)	Bang wē ö'lo
äl päe'ä	A sı ät'ic (shı)	Bä rä'nōf
Äl'pıne	äs'phalt (fält)	Bär'ba ry
Älps	Äs sām'	Bär'ea
Äl täl	As sı'sı (äs sē'zē)	Bär ęe lō'na
Äl tı mä hä'	As souan (äs swän)	Bär bä'dōş
ä lų'mı nŭm	As tō'rı a	Bär thōl'o mew
Am ä de'üs	äs trōn'ō mȳ	Bär rän quıl la (kēl'yä)
Am'a zōn	Ä sụn cı'ōn	Bär'rōw
äm'e thȳst	Ä ta eä'ma	Bä'sel
Äm'stēr dām	Ät bär'rä	ba sı'lı ea
Ä mür'	Ath a bäs'ea	Bät'ōn Rouge (ręzh)
A nām'	Äth ä nā'sı us (-shı-)	Bäy'ęu
An'dęs	Ät län'ta	Bēi'rüt
Än dö'r'rä	Ät län'tic	Bēl fäst'
Än dros cōę'gın	Ät'läs	Bēl ize'

Belle Isle
 Bën gäl'
 Be loit'
 Bën gug'la
 Bën in'ra
 Bēr bē'ra
 Bēr'bers
 Bērg'en
 Bē ring
 Bēr mū'das
 Ber na dette'
 Bērne
 Bēth'a nŷ
 Bē thēs'da
 Bēth'lē hēm
 Bhy tăn'
 Bi äf'ra
 Bid'de ford
 Btg'e lōw
 Bil bā'o
 Bil li tōn'
 Bi lōx'
 Bir'ming ham
 Bis'eay
 Bīs'marck
 bi tū mi noŷs
 Blāne, Mont [Mon Blān]
 Blān'eō
 Blēm'fon tein
 Bloom'ing ton
 Blū'men au (ōu)
 Bō gō tā'
 Bō hē'mī a
 Bois Brūle (bwä)
 Boi'se
 Bō khä'ra
 Bo liv'ī a
 Bō lōgn'a (yă)
 Bō'ma
 Bom bāy'
 Bōn
 Bōr deaux' (dō)
 Bōr'nē ō
 Bōs'phō rūs
 Bōs'tōn
 Bōth'nī a
 Bōul'der
 Bōze'man
 Bräh'man ism

Bräh'ma pu'tra
 Brät'tle bo rō
 Bra zil'
 Brēm'en
 Brēs'lau (lou)
 Briş'bāne
 Brīs'tol
 Brīt'ish Isles
 Brung'wick
 Brūs'sels
 Bū'da pest
 Būd'dhā
 Būd'dhism
 Būd'dhist
 Bue'nos Aires
 (bō'nus ā'rīz)

Būf'fa lo
 Bū kha rēst'
 Būl gā'rī a
 Bur'līng ton
 Bur'mā
 Bū shīre'
 Būtto
 Cā'bēs
 Cā brāl'
 cā cā'ō
 cāe'tus
 Cāi'rō
 Cāl cūt'ta
 Cāl ẽ dō'nī an
 Cāl ī fōr'nī ā
 Cāl lā'ō
 Cām bō'dī ā
 Cām'brīdge
 Cām'den
 cām pā nī'le
 Cām pē'chē
 Cā'naan
 Cān'a da
 Cā nā'ry
 Cān'çēr
 cāñ on (kăn'yŷn)
 Cān'so
 Cān tā'brī an
 Cān ton'
 Cāpe Brēt'on
 Cāp'rī eorn
 Cāpe Vērde
 Cā rā'eas

Cār'dē nas
 Cārls'bād
 Cār'men
 Cār pā'thi an
 Cār pen tā'ri a
 Cār rā'ra
 Cār īb bē'an
 Cār'son
 Cār ta gē'na
 Cār'thage (thēj)
 Cās cāde'
 Cās'eo
 Cās'pī an
 cās'sā va
 Cā sī qui ā're (kē)
 cāt'a cōmbs
 cā tō'che
 Cāts'kill
 Cāu cā'sian (shan)
 Cāu'cā sūs
 cāut chouē (kōō'chōōk)
 Cāy ēnne'
 Cē bu'
 Cēl'e bēs
 Cēn'tī grāde
 Ce tin je (tsē tēn'yā)
 Cēy lōn'
 Cēām
 Cēām plāin'
 cēām'ois (mŷ)
 Chā pā'lā
 Chārles'ton
 Chār'lotte town
 Chāt ta hōō'chee
 Chāu tāj'quā
 cēhēm'ie al
 Chē mūl'phō
 Cēhē'ōps
 Chē quam e gon
 (shē wā mē gōn)
 Chēr ry
 Chēs'a pēake
 Chē sūn'cook
 Chev'ī ot (chlv'ē ūt)
 Chōy'ēnne
 Chī cā'gō
 Chīd'ley
 Chī lē
 Chīm bō rā'zō

Chim păn' zêe

Chi'na

Chi'nêgê

Chíp pê wá

Chris ti á'ni á

Chris tián i ty

(chăn i ty)

Chúđ' lēigh

çin ehō'na

Çin çin nă'ti

Çi măr rōōn'

çlr' rūs

Clă' ver

Clēve' land

cō'bra

Cō'chin Chi'na

Cō lōgne'

Cō lōm' bō

Cōl o rā' do

Cō lūm' bī a

Cōm' or in

Cōn çep'tion

Cōn'cord (kērd)

Cōn ga rēe'

Cōn neet' i cūt

Cōn'stance

Cōn'stan tīne

Cōn stān tī nō'plē

Cō pen hā' gen

Cōpts

Cōr'Inth

Cōrk

Cōr ri ēn'tes

Cōr'si ea

Cōr'tēz

Cōs'ta Rī'ca

Cō tō pāz'i

Cōv'ing ton

Creigh tōn

Crēte

Crī mē'a

Cū'ba

Cūm'bēr land

cū'mu lūs

Cuz'eō (kūz)

çy'elōne

Çyp ri an

Çy'prus

Çyr'il

czār

Dạ mās' cūs

Dāne

Dā'nish

Dānt'zic (sīk)

Dān'ūbe

Dār da nēl/eç'

Dār'ling

Dārt'moūth

Dāv'çen pōrt

Dā'vid

Dā'vis

Dēath Vāl'ley

De cāp'ō līs

De cā'tur

de çīđ'ū ous

Dēk'kan

Dēl a gō'a

Dēl'ā wāre

Dēl'ā vān

Dēl'hī

Dēn'i son

Dēn'märk

Dēn'ver

Dēsh'nef

Dēs Moines'

Dē troit'

Di a măn tī'na

Di a măn tī'no

Di'áz

Dīs mal

Dniēs'ter

Dniē'per

Dōn

Dqu'rō

Dō'ver

Drēs'den

drōm'ē đă ry

Dūb'lin

Dū buque'(būk)

Dū lūth'

Dū'na

Dū rāp'go

Dwi'na

East'ham

Ēast'on

Eau Clāire'(ō)

E'bro

ēc elē sī ās'tie

ē cīlpse'

Ē'e'uā dōr

Ēd'in burgh (bur ro)

Ē'gypt

Ē gyp'tian (shan)

ej'der down

Ēlbe

Ēl burz'

Ēl'gin

Ēl mī'ra

Ēl Pā'sō

ēm'ēr ald

En'gland (In)

Ē pl's'cō pal

Ēph'ē sūs

Ē'rie

Ēs'kī mōs

ēs pār'tō

ēs'tū a ry

Ē thī ō'pī ān

Ēt'na

Ēū phrā'teş

Ēū rā'si a (shī)

Ēū rē'ka

Ēū'rōpe

Ēū rò pē'an

Ēv'anş vīl'e

Ēv'er est

Eyre (ār)

Fāh ren heit

Fā/k'land

Fāre'wēll'

Fār'go

Fā'rōe

Fēz

Fi'ji

Fin Is terre'(tār)

Fin'land

Fiord (fyōrd)

Flāt'ter ŷ

Flōr'ēnçe

Flōr'I da

Fōnd dū lāe'

Frānçe

Frānk'ford

Frā'zer

Franz Jo'sēf (Frānts Yō)

Frēd'ēr Ic ton

Frē mōnt'

Frénch'mănş	Guā de loupé'	Hũn'gá ry
Fụ châu'	Guām (gwām)	hy ē'nà
Fũn'dy	Guā tê mǎ'la	ĩ bē'ri an
Gābes	Guār dà fuĩ	ĩ'běx
Gāds'den	[gwār dà fwé]	ĩcē'land
Gārd'nēr	Guāy a quĩl' [kēl]	ĩ'dà hò
Gā lǎp'a gōs	Guāy'mas	ĩ'drĩ à
Gā lē'na	Guĩ k'ǎ	ĩ guǎ'nà
Gāl'ĩ lee	Guĩn'ēa	ĩ lō'ĩlō
Gāl'ĩ'nās (yē)	Guērn'sēy	ĩl'ĩl noĩs or [noĩz]
Gāl'ves ton	Gũth'riē	ĩn'ēas
Gāl'way	Hā'gerş town	ĩn'dĩ a
Gān'gēs	Hāguē	ĩn'dĩ an
Gā rōnne'	Hāi'tĩ	ĩn dĩ ǎn'a
Gen e see'	Hā ko dǎ'te	ĩn dĩ an ǎp'ō lĩs
Ge nē'va	Hǎl'ĩ fǎx	ĩn dō Chĩ'nà
Gēn'ō à	Hǎm'burg	ĩ'ō dīnē
Geōrge'town	Hǎm'mer fēst	ĩ'ō wà
Geōr'gĩ a	Hǎn'nĩ bal	ĩ'ō'nĩ an
Gēr mǎn'ic	Hār'lem	ĩ'quĩ'que [ē kē kǎ]
Gēr'mà nỹ	Hǎr'ris burg	ĩ'rán'
gey'sēr	Hǎrt'ford	ĩr a wǎ'dĩ
Ghāts	Hǎt'tēr ǎs	ĩrē'land
Ghēnt	Ha vǎn'a	ĩrv'ĩng
Gĩ brāl'tar	Hǎvēr hĩll	ĩr'kũtsk
Gĩ'lǎ (hē-)	Hǎvrē	ĩ'sō thērm
Gĩl'bert	Hà wǎl'ian [yan]	ĩsth'mũs
gĩ rǎffe'	Hǎb'ri dēs	ĩ'tǎl'ian [yan]
Gi ronde (zhē rōnd)	Hē'brōn	ĩ't'ǎ lỹ
glā'cier (glā sher)	Hēē'la	ĩ tǎs'cǎ
Glās'gōw	Hēr cũ lǎ'nē ũm	ĩth'ǎ cǎ
Glou ces ter (glōs'tēr)	Hēĩ'ē nà	Jǎck'son
Gō'bi	Hēĩ'les pont	Jǎck'son vĩl/e
Gōd hǎ'ven	Hēn lō'pēn	Jǎf'fa [yǎ'fǎ]
Gō mōr'rǎ	Hĩ mǎ'la ya	Jà mǎi'cǎ
Grand Rǎp'ids	Hĩn'dũ kũş	Jānēs'vĩl/e
Gōt'ten borg	Hĩn'đũ stǎn'	Jǎ pǎn'
grǎph'ĩte	hĩp po pōt'a mũs	Jǎp ǎ nēsē'
Grǎ'gĩ ǎs	Hoang [hwang]	Jǎs sy [yǎ'sĩ]
Grǎm'pĩ an	Hō'bart	Jǎ'vǎ
Grǎ nǎ'dǎ	Hō'bo ken	Jēf'fēr sōn
Grēāt Bǎr'ri ēr	Hōĩ'land	Jēr'ĩ ehō
Grēāt Brĩt ǎn	Hōn'đũ'ras	Jēr'sēy
Grē'cian (shan)	Hō nō lũ'lũ	Jē rũ'sǎ lēm
Grēēce	Hōn'dō	Jō ǎn'of Are'
Green'land	Hōng Kōng'	Jō hǎn'nes burg
Green'wich (grĩn'ĩj or grēn'ĩj)	Hũd'son	Jōhns'tōn
Guā dǎl quĩv'ir	Hũ'ron	Jō'ĩl ēt
	Hũm'bōĩdt	Jōr'dan

Ju ăn' đê Fu'ca [hụ ạn]

Ju ăn' Fer năn' dez

[hụ ạn]

Ju' đă ỉsm

Ju' đê' ă

Ju'neau [nô]

Ju'ra

Jut'land

Kă bụl'

Kad iak' [yăk]

Kăf'firs

Kăf'şer Wil'helm

Kă kăn'

Kă la hă'ri

Kăm chăt' kă

Kă nă' wă

Kăn'sas

Kă'ră

Kă ră'shî [kũ ră'chî]

Kăsh' mîr [mêr]

Kă tăh'din

Kê'ni ă

Kê'ne bêe

Kê nê'shă

Kên tũck' ỷ

Kê'wêe năw

Kê'ô kũk

Khă'r'tum

khê'dive

Khê lăt'

Khin ghăn'

Khî'vă

Ki lau ê'ă [lou]

Kil i măn jă ô'

Klîm' bêr ley

Kiô'len [kyê]

Klîr ghiz'

Klôn'dike

Knôx'vil'e

Ko kan' [kă kăn']

Kôn'go

Kô'ran

Kô rê'ă

Kôs çî ũs'kô

Kuên lụn' [kwên]

Kyô'tô

Lăb'ra dôr

Lă chîne'

lăe'quer [er]

Lă Crosse'

Lăd'ô gă

Lă Făy ətte'

Lă Guay'ra

Lăng'lăde

Lăns'ing

Lă Păz'

Lă Pointe'

Lăp'land

Lăpps

Lă Săl'e'

Lăs'să

Lăw'rênce [rêns]

Lăav'en worth

Lăb'ă nôn

Lăeds

Leip'zig [sik]

Lê'na

Lê'ôn

Lê'o pôld

lêv'êes

Le veque [lă văk']

Lêx'ing ton

Lêy'den

Lî bē'ri a

Lîb'ỷ an'

lî'chen (ken)

lîc'ô rice [ris]

Lêf'feý

Lî'ma

Lîm'êr ick

Lîp'cô/n

Lîş'bôn

Lis'bârne

Lîv'êr pōl

Lîv'ing stōne

llă'mă

llă'noş

Llă'no Es tă ca da

[ăs tă kă'dô]

Lô'ă

Lô fô'den

Lô'gan

Loire [lwăr]

Lôm' bār dy

Lôn'dôn dēr ry

Lôs Ăn'gêl es

Lou'ỉ sĩ ăn'a

Lou'is vil'e

Lourdes (lôrd)

Lôw'êl'

Lụ ă lă'bă

Lụ ă pụ'lă

Lụ çerne'

Lũx'êm bũrg

Lụ zôn'

Lỹ'ônş

Măe kên'zê

Măd ă găs'căr

Mă dēi'ră

Mă drăs'

Mă drîd'

Măel'strôm

Măg dă lē'nă

Ma gēl'lan

măg'uey [wă]

Mă'hăl

mă hōg'a ny

Măine

Mar que sas

[mar kă'săs]

Măck'ỉ năc

Mă lăe'cà

Măl'a gă

Mă'lăr

Mă lăy'

Mă lăy'si a [shî a]

Măl'tă

Mă nă'quă

Măn'chês ter

Măn hăt'tăn

Ma nil'a

Mă'nỷ ăc

Măn'ỉ tō'ba

Man za nil lo

[Mănth ă nêl'yô]

Mă rạ eă'bô

Mă ră'jo [zhô]

Mă'r'çy

Mă'r'mô rá

Ma rí ê'to

mă'r'ỉ tîme

Măr quette' [ket]

Măr sêl'lêş'

Măr tî nique' (nêk)

Mă'rỷ land [mêr]

Măs kăt'

Măs sà chũ'sêtts

Mau' nă Lō'ă (mon)

mău sô lē'ăm

Măy' nōōth

Mă zăt lăn'

Măe'ea

Me dī'na

Măd i tēr rā'nē an

Mă'ggs

Mă kōng'

Măi a nē'si a (shī a)

Măi' bōūrne

Măi'villē

Mēm'phīs

Me nām'

Mēn dō cī'no

Mēn dō'ta

Me nōm'o nee

Me nō'na

Mēr'ri mǎc

Mēr'gēy

Mēs o po tǎ'mǎ a

Mes sī'nă

mēs tǐ'zō

Măx'i co

Mī ăm'ī

Mieh'ael ăm'gē lō

Mīch'ī gǎn

Mī crō nē'si a (shī a)

mǐ kǎ'dō

Mīl'an

Mīl wău'kēe

Mīn lă nă'o

Mīn dō'ro

Mīn ne ăp'ō līs

Mīn nē hă'hă

Mīn ne sō'ta

Mīs sīs sǐp'pī

Mīs sōu'ri

Mīтч'el

Mō bīlō'

Mō'eha

Mō gūl'

Mo hām'med an

Mo hām'med an igr

Mō hă'vę

Mō'hawk

Mō lō kăi'

Mō lūe'eaș

Mōn'ă eō

Mon gō'li a

Mō nōn gǎ hē'lă

Mōn rō'vī ă

Mōs'eōw

mōn sōōn'

Mōs qui'to (kē tō)

Mōn tă'na

Mōn tę nę'gro

Mōn tē vīd'ēo

Mont gōm'er y

Mōnt pē'li er

Mōnt rē ăl'

Mōōrs

Mōōse'hēad

Mō rē'li a

Mō rōe'eo

Mōul'trie

Mount Sī'on

Muk dēn'

Mū'nieh

Mūr'ray

Năb u ehō dōn'ō sōr

Nă gǎ sǎ'ki

Năn tūck'et

Nă'ples

Năr'rowș

Năsh'vīlē

Năтч'ēz

Năz'ă rēth

Nē brās'kă

nē grī'tōș

Nēl'son

Nę pǎl'

Neūșe

Nę'vă

Ne vǎ'da

New'ark (nu'ērck)

New Brūng'wick

New Căl e dō'nī a

New'foūnd land

New Guīn'ēa

New Hămp'shire

New Hă'ven

New Jēr'sey

New Or'lē anș

New Yōrk'

New Zēa'land

Nēth'ēr landș

Nī ăg'ă ră

Nī cǎ rǎ guă

Nīșe

Nī'ger

Nīle

Nīn'ē veh

Nīng'po

nī'trătē

nō mǎd'ie

North Căl ō lī'na

North Da kō'ta

Nōr thūm'bēr land

Nōr'ton

Nōr'way

Nō'va Sēō'ti a (shī a)

Nō'va Zēm'bla

nīm'būs

Nue'șes

Ny ăs'să (nē)

O ă'hų

ō'a sis

Oa xa ca (wǎ hǎ'kǎ)

Ōb

O ce ăn'ī ea (shē)

O eōn'tō

Oe mǎl'gēe

O'dēr

Ō dēs'sa

Ōg'den

O hī'o

O kē chō'bēe

Ō khōtsk'

Ōk lă hō'ma

Ōl'ī vēt

Ō lým'pī a

Ō'mă hă

Ō mǎn'

Ōmsk

Ō nē'ga

On tǎ'ri ō

Ō nyx (ō nīx)

Ō pōr'tō

Ōp tǎ'tus

Ō rǎn'

Ōr'e gōn

Ōr'ī gēn

O rī nō'cō

Ōrk'nēy

O rī zǎ'ba (sǎ'vă)

O sǎ'kǎ

Ỗsh'kôsh
 Ỗs wê'gô
 O trăn'to
 Ỗt'tà wà
 Ỗx'fôrd (fêrd)
 Ỗ'zàrk
 Pà çif'ie
 Păd'ũ à
 Pà lěr'mô
 Păl'es tĩne
 păl'ĩ săde'
 Pă'lô Ấl'tô
 Pă mir'
 Păm'li cō
 păm'păş
 Păn à mǎ'
 Pà năy'
 Pă ră'
 Păr à mǎr'ĩ bō
 Pă rà guay'
 Pă rà nǎ'
 Pă'rĩ à
 Pă rĩ'nǎ
 Păr'is
 Păs'eō
 pà shǎ'
 Păs sà mà'quôđ'dy
 Păt à gō'nĩ à
 pēat
 pēe'eà ry
 Pē'chĩ li
 Pē kĩn'
 Pe lee (pe lǎ')
 Pē lew'(lũ)
 Pēnn sỹl vǎ'nĩ à
 Pe nōb'scôt
 Pe nō'kee
 Pe ơ'rĩ à
 Pēp'ĩn
 Pēr năm bự'eō
 Pēr'sia (shà)
 Pērth
 Pe rụ'
 Pe rụ'vĩ an
 phēas'ant (fēz'ant)
 Phĩl a dẻl'phĩ à
 Phĩl'íp (fĩl íp)
 Phĩl'íp pĩnes
 Phĩ lĩs'tĩne

Phoe ni ci ans
 (fê nĩsh'anş)
 Phoē'nĩx
 Pĩed'mōnt
 Pĩ'o Nō'no
 Pĩ rae'us
 Pĩ'sà
 Plă teau'(tō)
 plǎt'ĩ nũm
 Plătte'vĩlle
 Pō
 Pōl ỹ nẻ'si a [shĩ a]
 Pōm pe'ii [yẻ]
 Pon ce,de Le on
 [pōn'thǎ dǎ là ỗn]
 Pō pō cǎt e petl'
 Pōrt'au Prĩnce'[au=ỗ]
 Pōrt'land
 Pōr tō rĩ'cō
 Pōr'tũ gāl
 Pōr'tũ gũēşe
 Pō tō'mae
 Po tō'sĩ
 Pō yǎng'
 Prǎ'r'ĩe dũ Ch'ĩen'
 Prẻs bỷ tẻ'rĩ an
 Prĩ bĩ lỏf'
 Pro gre'so
 prỏm'ỗn tỏ rỷ
 Prỏv'ĩ dençe
 Pōrt Sǎ'id
 Pũ'get
 pỷ'r'ả mĩđ
 Pỷ'r'e nẻēş
 Quẻ bẻe'
 Quẻēnş'land
 Rà çĩne'
 rǎf'fĩ à
 Rǎi'u'ẻr
 Rǎ'leĩgh
 Rǎnge'leỷ
 Rǎp pa hǎn'nỏck
 Rǎp'ĩ dǎn
 Rẻad'ing
 Reau'mur [rỏ'mẻr]
 Rẻĩ'kĩ à vĩk
 Rẻ'no
 rẻẻ'ả
 Rhĩne

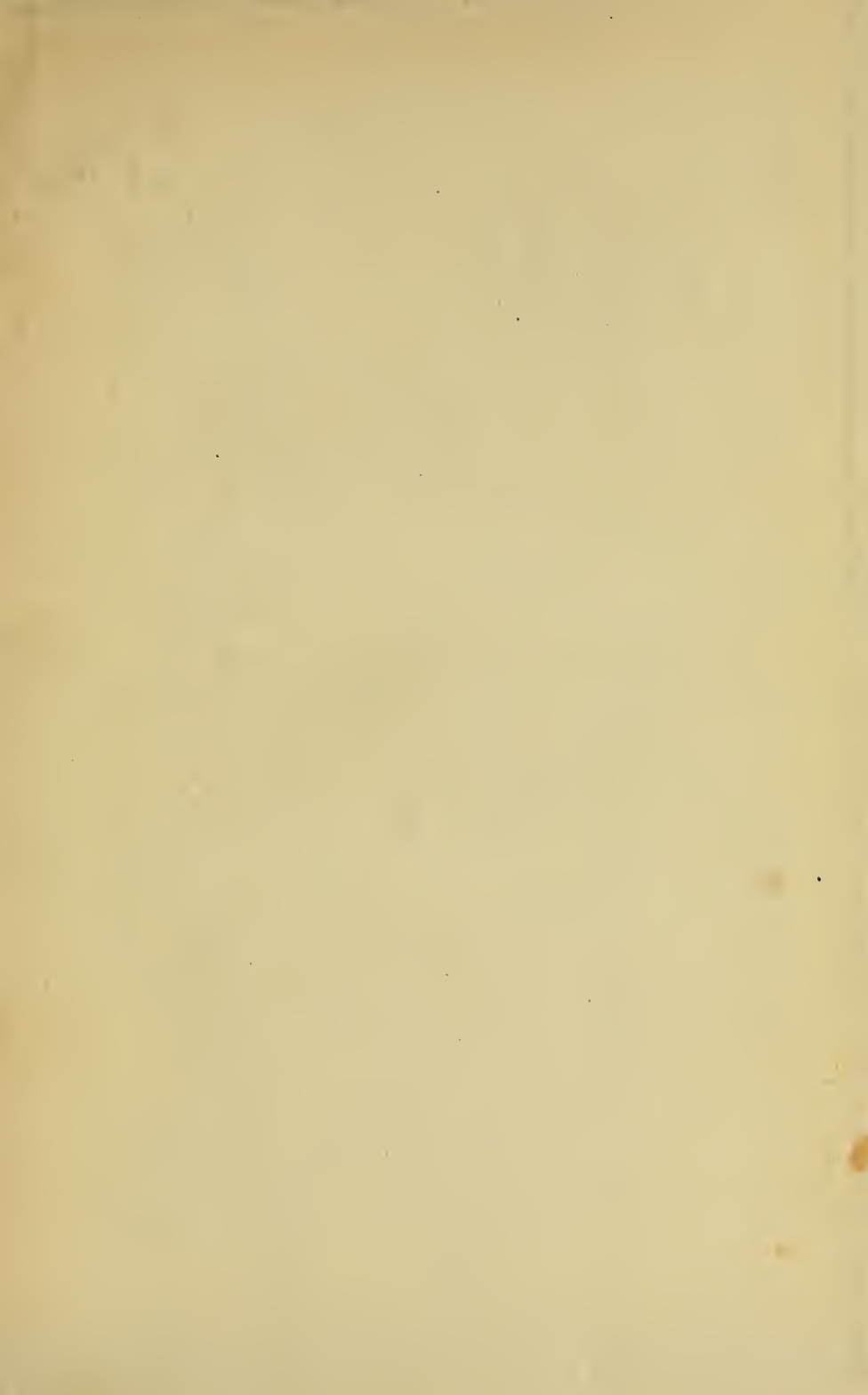
rẻỉ nỏç'ẻ rỏs
 Rhỏne
 Rẻi çẻe lẻẻu'[lỗỗ]
 Rẻĩ'o dẻ là Plǎ'tà
 Rẻ'ga
 Rẻĩ'o Grǎn'dẻ
 Rẻĩ'o Jǎ nẻ'rỏ
 Rẻĩ'o Nẻ'grỏ
 Rẻ'a nỏke
 Rỏch'ẻs tẻr
 Rỏme
 Rỏ sǎr'ỏ
 Rỏt'tẻr dǎm
 Rỏụ en'[ỗm]
 Rỏụ mǎ'nĩ à
 Rỏy'ale
 Rus sia [rủsh'a]
 Sa bẻnẻ'
 Sǎ'ble
 Sẻ'eō
 Sẻc rà mẻn'to
 Sẻg'ĩ naw
 sẻ'gỏ
 Sẻ hǎ'rǎ
 Sẻk hǎl ỉn'(yẻn)
 Sẻ'lem
 Sẻ lỏ nẻ'kĩ
 Sẻ mǎ'rẻ à
 Sẻ mỏ'ả
 Sẻn An tỏ'nẻ ỗ
 Sẻn Dẻ ẻ'gỏ
 Sẻn Frǎn çẻis'eo
 Sẻn'gỏ mỏn
 Sẻn Jo a quĩn'(hỏ ả kẻđ)
 Sẻn Jo se'[hỏ sǎ]
 Sẻn Ju ǎn'[hủ]
 Sẻn Lự'eas
 Sẻn Mǎ rẻ'no
 Sẻn Pau'lo
 Sẻn Sǎl vǎ dỏr'
 Sẻn'ta Bẻr'ba ra
 Sẻn'tẻ Fe'
 Sẻn tẻ ả'gỏ
 Sẻn'to Dỏ mĩn'gỏ
 Sẻn'tỏs
 sẻp'phẻre (sẻǎ'ỉr)
 Sẻr a tỏ'gỏ
 Sẻr dẻn'ỉ a
 Sẻs kǎtch'ẻ wạn

Sault' Ste. Marie	Spär töl'	Tăş mã' nĩ a
(sq' sânt Mă ri)	sphĩn̄x	7chăd'
Sà vãn' năh	Spĩtz bẽrg' en	Tẽ gũ çĩ găĩ' pà
Scăn dĩ nă' vi ả	Spree	Tẽ hẽ răn'
Sehe nẽe' ta dy	St. Au' gus tĩne	Te huăn tẽ pẽe'
Schuy' lẽr	Stăn' leỹ	Tẽn ẽr ỉfẽe'
Sci õ' to	Stä nõ voi'	Tẽn nes see'
Sẽ ất' tle	Stăt' en	Teũ' tẽn
Sẽne	St. Clăır'	Tẽx' as
Se oul' (sẽõõl)	St. Croix'	tẽx' tĩlẽs
Sẽr' vi ả	St E li' as	Tẽz eõ' eõ
Sẽ vãs' tồ pồ	St. Et ienne' (ã tẽ ẻn)	Thames (tẽmz)
Sẽv' ern	St. Gõt' hard	Thĩ ản' shăn
Shăh	St. He lẽ' nă	Tĩ bết'
Shăng hă' ỉ	St Lợ' ỉs	Tĩ ẻn' tsĩn
Shăn' non	Stöck' hõ/ m	Tĩ ẻr' rả dẻl' Fug' go
Shăs' ta	St. Pẽ' ters burg	Tĩf lĩs'
Shẽ boy' găn	St. Pi erre' (pẽ ảr')	Tĩ' grĩs
Shẻf' fiẽld	Ström' bo li	Tĩm bũe' tồõ
Shẻn ản dỏ' ảh	St. Rõque' (rõk)	Tĩ mỏr'
Shẻt' land	St. Stẻ ven	Tĩr' ỏl [or Tẻr]
Shi kỏ' kũ	St. Vĩn' cẻnt	Tĩ' tus
Shỏ shỏ' nẻ	Su chau' (chou)	Tỏ bỏĩs'
Sĩ ắm'	Sũ' ere	Tỏ căn tĩne'
Sĩ bẻ' rĩ ả	Sũ ẻz'	Tỏ' kỷ o
Sĩc' ỉ ly	Sũ' lũ	Tỏm bĩg' bee
Sĩd ra	Sũl' tan	Tỏmsk
Sĩ ẻr' ra Mã' drẻ	Sũ mã' trả	Tỏn kin'
Sĩ ẻr' ra Nẻ vả' dả	Su pẻ' rĩ or	tỏ' pảz
sĩ/vas	Sũs quẻ hăn' na	To pẻ' ka
sĩ mỏõn	Swẻ' den	Tỏp' lĩtz
Sĩ' năi	Swĩt' zẻr land	To rỏn' to
Sĩn ga pỏẻ'	Sỷd' ney	Tỏr' rẻs
sĩ sảĩ'	Sỷr a eũse'	Tỏr' rĩ cẻl' li
Sĩt' ka	Tả' bor	Trảns vảal'
Skăg' gẻr rắck	Tả eõ' ma	Trẻn' ton
Slả vỏn' ie	Tả' gũs	Trĩ ẻste'
Smỷr' nả	Tả hĩ' tĩ	Trĩn ỉ dảd'
Sỏd' om	Tả hỏe'	Trĩn' ỉ ty
Sỏ fi' ả	Tảĩ la hắs' see	Trĩp' o li
sỏl' der	Tẳm' pả	Trỏm' sỏ (trỏms' ẻ)
Sỏl' o mon	Tẳm pỉ' eõ	tsẻt' sẻ
sỏl' stẻcỏ	Tả nả nả rĩ' vỏ	Tủc' sỏn
Sỏn' ne berg	Tăn găn yĩ' kả	tụn' dras
Sỏõ	Tản gẻers	Tủ' rĩn
Sỏr' rẻl	Tả' rả	Tủrk
Sỏu dăn'	Tảr' tars	tủr quỏise' [koiz]
South ẳmp' ton	Tảr' tả rỷ	Tủ tũ ỉ' lả
Spảr' tả	Tảsh kẻnd'	

tỵ phōn
 Ụ'per nă vīk
 Ū'ral
 Ụ rụ guay'
 U'tah
 Văi'dai
 Văi pă rai'sō
 Văi eo'vēr
 Văi'nă
 Văi'eō dă Gă'mă
 Văi'ī can
 Văi e zu'e'la
 Văi'īce
 Văi'ră Cruz'
 Văi'de
 Văi mōnt'
 Văi sâi/ēs'
 Văi sū'vī ũs
 Văi chý'(shī)
 Vicks'burg
 Văi tō'rī a
 vī cu'na (kōn yá)
 Văi ěn'nă
 Văi ģin'ī à

Văi'stū la
 Văi dī vōs tōk'
 Văi'gă
 Văi'tūre
 Wă'băsh
 Wăke'
 Wăleś'
 Wăi'saw
 Wăsh'ing ton
 Wă' ter bur y (bēr)
 Wă ter lōō'
 Wău kē'gan
 Wăi'land
 Wen'ner (ven-)
 Wē'şer (Vă'zer)
 Wăş'Min ster
 Wă't'ter (Vet-)
 Whēel'ing
 Whīt'ney
 Wilkes'hăi rē
 Wil lă'mette
 Wīl'ming tōn
 Wīn nē bă'gō
 Wīn'nī pēg

Wī nō'nă
 Wī nōōs'kī
 Wīs cōn'sin
 Wōōl'wich (īj)
 Wor ces ter (wōōs'ter)
 Wrăn'gel
 Wu'chang (wōō chăng)
 Wŷ ō'ming
 Xin gu (shēn gō)
 Yă blo noi'
 Yăng'tze
 Yă pū'ră
 Yăi sē'ī
 Yō kō hă'mă
 Yō sēm'ī tē
 Yŷ'kōn
 Ză'grōs
 Zăm bē'zī
 Zēa'land
 Zŷ'rēh
 Zuŷ der Zēe'



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